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From: Ford, Vanessa
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To: STIC-Biotech/ChemLib
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0095-1137/01/$04.00+0 DOI: 10.1128/JCM.39.1.315-322.2001

Immunodiagnosis of Ehrlichia canis Infection with Recombinant Proteins

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Vanessa L. Ford
Biotechnology Patent Examiner
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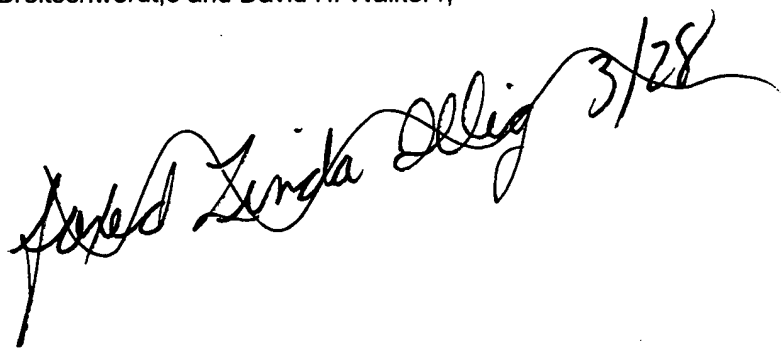

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Location: _____	Structures:_____	Questel/Orbit: _____
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Journals

1 April 2002

Ms. Caryn S. Wesner-Early
Biotechnology and Chemical Library
US Patent & Trademark Office
Crystal Mall 1, Room 1C19
Arlington, VA 22202

Dear Ms. Wesner-Early:

The mailing date of the January 2001 issue of the *Journal of Clinical Microbiology* was 4 January 2001. The full text was posted on the Internet on 2 January 2001.

Sincerely,

Linda M. Illig
Director, Journals

1752 N Street, NW • Washington, DC • 20036-2804
tel: 202-737-3600 • fax: 202-942-9355 • email: journals@asmusa.org

(FILE 'HOME' ENTERED AT 11:21:50 ON 28 MAR 2002)

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH, USPATFULL, JAPIO' ENTERED AT 11:22:01 ON 28 MAR 2002

L1	6662	S	EHRLICHIA
L2	2238	S	L1 AND CANIS
L3	536	S	L2 AND CHAFFEENSIS
L4	2605001	S	ANTIBODY
L5	2304317	S	DETECTION
L6	248393	S	L4 AND L5
L7	156	S	L6 AND L2
L8	48	S	L6 AND L3
L9	5483	S	DIAGNOSTIC KIT
L10	6	S	L9 AND L7
L11	6	S	L9 AND L8
L12	6	DUP REM	L10 (0 DUPLICATES REMOVED)
L13	6	DUP REM	L11 (0 DUPLICATES REMOVED)

=>

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH, USPATFULL, JAPIO' ENTERED AT 13:06:26 ON 28 MAR 2002

L16	26	S EHRLICHIA ANTIBODIES
L17	7	S L16 AND DETECTION
L18	2	S L17 AND IMMUNOASSAY?
L19	46	S ANDERSON, BURT/AU
L20	4	S L19 AND EHRLICHIA
L21	26	S EHRLICHIA CANIS AND IMMUNOASSAY?
L22	21	DUP REM L21 (5 DUPLICATES REMOVED)
L23	0	S ENRLICHIA CHAFFEENSIS AND IMMUNOASSAY?
L24	44	S EHRLICHIA CHAFFEENSIS AND IMMUNOASSAY?
L25	27	DUP REM L24 (17 DUPLICATES REMOVED)

FILE 'AGRICOLA, LIFESCI, CONFSCI, BIOSIS, VETU, VETB, PHIN, PHIC' ENTERED AT 11:28:15 ON 28 MAR 2002

L14	2661	S	EHRLICHIA
L15	930	S	L1 AND CANIS
L16	560	S	L1 AND CHAFFEENSIS
L17	727110	S	ANTIBODY
L18	433628	S	DETECTION
L19	65983	S	L17 AND L18
L20	52	S	L19 AND L15
L21	34	S	L19 AND L16
L22	36	DUP REM	L20 (16 DUPLICATES REMOVED)
L23	20	DUP REM	L21 (14 DUPLICATES REMOVED)

12 ANSWER 1 OF 6 USPATFULL
AB Nucleic acids encoding eleven different proteins of granulocytic erhlichia (GE), a tick-borne intracellular bacteria, have been isolated and sequenced completely. These DNAs were isolated as immunoreactive clones from a Lambda Zap II genomic library of GE DNA purified from infected HL60 cells. Three of the clones, E8, E80, and E46, contain open reading frames for four highly homologous proteins which appear to be part of a multigene family resembling the MSP-2 gene family of Anaplasma marginale. One clone, B3, contained a gene encoding the heat shock 70 protein. The other clones (W20, E74, and E82) contain open reading frames for proteins which have some homology to other bacterial proteins present in the nucleotide and protein databases. These and other GE antigens identified by immunoscreening of the genomic library are potentially useful as diagnostic reagents and vaccine candidates for GE.
AN 2001:184841 USPATFULL
TI Nucleic acids, proteins, and methods of use of granulocytic **ehrlichia**
IN Murphy, Cheryl, Hopkinton, MA, United States
Storey, James, Linwood, MA, United States
Beltz, Gerald A., Lexington, MA, United States
Coughlin, Richard T., Leicester, MA, United States
PA Aquila Biopharmaceuticals Inc., Framingham, MA, United States (U.S. corporation)
PI US 6306394 B1 20011023
AI US 1998-66047 19980424 (9)
PRAI US 1997-44869P 19970425 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swart, Rodney P.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 67 Drawing Figure(s); 63 Drawing Page(s)
LN.CNT 2116
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 2 OF 6 USPATFULL
AB The present invention relates, in general, to granulocytic **Ehrlichia**. In particular, the present invention relates to a human promyelocytic leukemia cell line infected with granulocytic **Ehrlichia**, a method of continually growing granulocytic **Ehrlichia**, vaccines comprising granulocytic **Ehrlichia** or granulocytic **Ehrlichia** antigens, methods of preventing ehrlichiosis in an animal, **antibodies** to granulocytic **Ehrlichia**, and methods for identifying granulocytic **Ehrlichia** in an animal.
AN 2001:147456 USPATFULL
TI Cell lines infected with granulocytic **ehrlichia**, vaccines, diagnostics and methods
IN Coughlin, Richard T., Leicester, MA, United States
Gingrich-Baker, Cindy, Boylston, MA, United States
PA Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)
PI US 6284238 B1 20010904
AI US 1995-470358 19950606 (8)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swartz, Rodney P.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 3 OF 6 USPATFULL

AB The present invention relates, in general, to granulocytic **ehrlichia** (GE) proteins. In particular, the present invention relates to nucleic acid molecules coding for GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins; purified GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins and polypeptides; recombinant nucleic acid molecules; cells containing the recombinant nucleic acid molecules; **antibodies** having binding affinity specifically to GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins and polypeptides; hybridomas containing the **antibodies**; nucleic acid probes for the **detection** of nucleic acids encoding GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins; a method of detecting nucleic acids encoding GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins or polypeptides in a sample; kits containing nucleic acid probes or **antibodies**; bioassays using the nucleic acid sequence, protein or **antibodies** of this invention to diagnose, assess, or prognose a mammal afflicted with ehrlichiosis; therapeutic uses, specifically vaccines comprising S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins or polypeptides or nucleic acids; and methods of preventing or inhibiting ehrlichiosis in an animal.

AN 2001:40466 USPATFULL

TI Characterization of granulocytic **ehrlichia** and methods of use

IN Murphy, Cheryl, Hopkinton, MA, United States
Storey, James, Linwood, MA, United States
Beltz, Gerald A., Lexington, MA, United States
Coughlin, Richard T., Leicester, MA, United States

PA Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

PI US 6204252 B1 20010320

AI US 1998-66046 19980424 (9)

PRAI US 1997-44933P 19970425 (60)

DT Utility

FS Granted

EXNAM Primary Examiner: Swart, Rodney P.

LREP Hale and Dorr LLP

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN 82 Drawing Figure(s); 72 Drawing Page(s)

LN.CNT 2806

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 4 OF 6 USPATFULL

AB The present invention relates, in general, to granulocytic **Ehrlichia**. In particular, the present invention relates to a cell line selected from the group consisting of a promyelocytic leukemia cell line, an acute myelogenous leukemia cell line, a histiocytic lymphoma cell line, a monocyte macrophage-like cell line, an acute monocytic leukemia cell line, and an embryonic lung cell line wherein the cell line is infected with granulocytic **Ehrlichia**, a method of continually growing granulocytic **Ehrlichia**, vaccines comprising granulocytic **Ehrlichia** or granulocytic **Ehrlichia** antigens, methods of preventing ehrlichiosis in an animal, **antibodies** to granulocytic **Ehrlichia**, and methods for identifying granulocytic **Ehrlichia** in an animal.

AN 1999:137009 USPATFULL

TI Cell lines infected with granulocytic **ehrlichia**, vaccines, diagnostics and methods

IN Coughlin, Richard T., Leicester, MA, United States
Gingrich-Baker, Cindy, Boylston, MA, United States

PA Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

PI US 5976860 19991102

AI US 1996-613415 19960311 (8)
RLI Continuation-in-part of Ser. No. US 1995-470358, filed on 6 Jun 1995
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.
LREP Hale and Dorr LLP
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 1235
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 5 OF 6 USPATFULL
AB A new isolate of **Ehrlichia** species has been obtained from a patient suffering from ehrlichiosis. The new isolate has been found to be similar, but distinctly different from E. **canis**. A **diagnostic kit** and methods for diagnosing ehrlichiosis in humans and for screening drugs toxic to the new isolate have been described.
AN 1998:91807 USPATFULL
TI Identification of a new **Ehrlichia** species from a patient suffering from Ehrlichiosis
IN Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5789176 19980804
AI US 1997-943464 19971003 (8)
RLI Continuation of Ser. No. US 1995-394464, filed on 27 Feb 1995, now abandoned which is a division of Ser. No. US 1993-147891, filed on 5 Nov 1993, now patented, Pat. No. US 5413931 which is a continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Elliott, George C.; Assistant Examiner: Schwartzman, Robert A.
LREP Fitch, Even, Tabin & Flannery
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 493

L12 ANSWER 6 OF 6 USPATFULL
AB A new isolate of **Ehrlichia** species has been obtained from a patient suffering from ehrlichiosis. The new isolate has been found to be similar, but distinctly different from E. **canis**. The new isolate is E. chaffeensis and is contained in a cell line of canine macrophage cells on deposit with the American Type Culture Collection under accession number CRL 10679. The new isolate must be contained in a cell line in order to remain viable but may be isolated from the cell line. However, the isolate will not remain viable outside of the cell line. A **diagnostic kit** and methods for diagnosing ehrlichiosis in humans and for screening drugs toxic to the new isolate have also been desclosed.
AN 95:40869 USPATFULL
TI **Ehrlichia** species from a patient suffering from ehrlichiosis
IN Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PA United States of America, Washington, DC, United States (U.S. government)
PI US 5413931 19950509
AI US 1993-147891 19931105 (8)
RLI Continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now

abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Robinson, Douglas W.; Assistant Examiner: Ware, Deborah K.
LREP Needle & Rosenberg
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 376

22 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:83487 CAPLUS
DOCUMENT NUMBER: 134:350187
TITLE: Immunodiagnosis of **Ehrlichia canis** infection with recombinant proteins
AUTHOR(S): McBride, Jere W.; Corstvet, Richard E.; Breitschwerdt, Edward B.; Walker, David H.
CORPORATE SOURCE: Department of Pathology and WHO Collaborating Center for Tropical Diseases, University of Texas Medical Branch, Galveston, TX, 77555, USA
SOURCE: Journal of Clinical Microbiology (2001), 39(1), 315-322
CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:550009 CAPLUS

DOCUMENT NUMBER: 136:182061

TITLE: Recombinant major antigenic protein 2 of **Ehrlichia canis**: A potential diagnostic tool

AUTHOR(S): Alleman, A. Rick; Mcsherry, Leo J.; Barbet, Anthony F.; Breitschwerdt, Edward B.; Sorenson, Heather L.; Bowie, Michael V.; Belanger, Myriam

CORPORATE SOURCE: Department of Physiological Sciences, University of Florida, Gainesville, FL, 32610, USA

SOURCE: Journal of Clinical Microbiology (2001), 39(7), 2494-2499
CODEN: JCMIDW; ISSN: 0095-1137

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 1 OF 6 USPATFULL
AB Nucleic acids encoding eleven different proteins of granulocytic erhlichia (GE), a tick-borne intracellular bacteria, have been isolated and sequenced completely. These DNAs were isolated as immunoreactive clones from a Lambda Zap II genomic library of GE DNA purified from infected HL60 cells. Three of the clones, E8, E80, and E46, contain open reading frames for four highly homologous proteins which appear to be part of a multigene family resembling the MSP-2 gene family of Anaplasma marginale. One clone, B3, contained a gene encoding the heat shock 70 protein. The other clones (W20, E74, and E82) contain open reading frames for proteins which have some homology to other bacterial proteins present in the nucleotide and protein databases. These and other GE antigens identified by immunoscreening of the genomic library are potentially useful as diagnostic reagents and vaccine candidates for GE.
AN 2001:184841 USPATFULL
TI Nucleic acids, proteins, and methods of use of granulocytic **ehrlichia**
IN Murphy, Cheryl, Hopkinton, MA, United States
Storey, James, Linwood, MA, United States
Beltz, Gerald A., Lexington, MA, United States
Coughlin, Richard T., Leicester, MA, United States
PA Aquila Biopharmaceuticals Inc., Framingham, MA, United States (U.S. corporation)
PI US 6306394 B1 20011023
AI US 1998-66047 19980424 (9)
PRAI US 1997-44869P 19970425 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swart, Rodney P.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 67 Drawing Figure(s); 63 Drawing Page(s)
LN.CNT 2116
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 2 OF 6 USPATFULL
AB The present invention relates, in general, to granulocytic **Ehrlichia**. In particular, the present invention relates to a human promyelocytic leukemia cell line infected with granulocytic **Ehrlichia**, a method of continually growing granulocytic **Ehrlichia**, vaccines comprising granulocytic **Ehrlichia** or granulocytic **Ehrlichia** antigens, methods of preventing ehrlichiosis in an animal, **antibodies** to granulocytic **Ehrlichia**, and methods for identifying granulocytic **Ehrlichia** in an animal.
AN 2001:147456 USPATFULL
TI Cell lines infected with granulocytic **ehrlichia**, vaccines, diagnostics and methods
IN Coughlin, Richard T., Leicester, MA, United States
Gingrich-Baker, Cindy, Boylston, MA, United States
PA Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)
PI US 6284238 B1 20010904
AI US 1995-470358 19950606 (8)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Swartz, Rodney P.
LREP Pennie & Edmonds LLP
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 3 OF 6 USPATFULL

AB The present invention relates, in general, to granulocytic **ehrlichia** (GE) proteins. In particular, the present invention relates to nucleic acid molecules coding for GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins; purified GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins and polypeptides; recombinant nucleic acid molecules; cells containing the recombinant nucleic acid molecules; **antibodies** having binding affinity specifically to GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins and polypeptides; hybridomas containing the **antibodies**; nucleic acid probes for the **detection** of nucleic acids encoding GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins; a method of detecting nucleic acids encoding GE S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins or polypeptides in a sample; kits containing nucleic acid probes or **antibodies**; bioassays using the nucleic acid sequence, protein or **antibodies** of this invention to diagnose, assess, or prognose a mammal afflicted with ehrlichiosis; therapeutic uses, specifically vaccines comprising S2, S7, S22, S23, C6.1, C6.2, S11, E8, E46#1, and E46#2 proteins or polypeptides or nucleic acids; and methods of preventing or inhibiting ehrlichiosis in an animal.

AN 2001:40466 USPATFULL

TI Characterization of granulocytic **ehrlichia** and methods of use

IN Murphy, Cheryl, Hopkinton, MA, United States
Storey, James, Linwood, MA, United States
Beltz, Gerald A., Lexington, MA, United States
Coughlin, Richard T., Leicester, MA, United States

PA Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

PI US 6204252 B1 20010320

AI US 1998-66046 19980424 (9)

PRAI US 1997-44933P 19970425 (60)

DT Utility

FS Granted

EXNAM Primary Examiner: Swart, Rodney P.

LREP Hale and Dorr LLP

CLMN Number of Claims: 23

ECL Exemplary Claim: 1

DRWN 82 Drawing Figure(s); 72 Drawing Page(s)

LN.CNT 2806

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 4 OF 6 USPATFULL

AB The present invention relates, in general, to granulocytic **Ehrlichia**. In particular, the present invention relates to a cell line selected from the group consisting of a promyelocytic leukemia cell line, an acute myelogenous leukemia cell line, a histiocytic lymphoma cell line, a monocyte macrophage-like cell line, an acute monocytic leukemia cell line, and an embryonic lung cell line wherein the cell line is infected with granulocytic **Ehrlichia**, a method of continually growing granulocytic **Ehrlichia**, vaccines comprising granulocytic **Ehrlichia** or granulocytic **Ehrlichia** antigens, methods of preventing ehrlichiosis in an animal, **antibodies** to granulocytic **Ehrlichia**, and methods for identifying granulocytic **Ehrlichia** in an animal.

AN 1999:137009 USPATFULL

TI Cell lines infected with granulocytic **ehrlichia**, vaccines, diagnostics and methods

IN Coughlin, Richard T., Leicester, MA, United States
Gingrich-Baker, Cindy, Boylston, MA, United States

PA Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

PI US 5976860 19991102

AI US 1996-613415 19960311 (8)
RLI Continuation-in-part of Ser. No. US 1995-470358, filed on 6 Jun 1995
DT Utility
FS Granted
EXNAM Primary Examiner: Housel, James C.; Assistant Examiner: Swartz, Rodney P.
LREP Hale and Dorr LLP
CLMN Number of Claims: 34
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 1235
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L13 ANSWER 5 OF 6 USPATFULL
AB A new isolate of **Ehrlichia** species has been obtained from a patient suffering from ehrlichiosis. The new isolate has been found to be similar, but distinctly different from E. **canis**. A **diagnostic kit** and methods for diagnosing ehrlichiosis in humans and for screening drugs toxic to the new isolate have been described.
AN 1998:91807 USPATFULL
TI Identification of a new **Ehrlichia** species from a patient suffering from Ehrlichiosis
IN Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5789176 19980804
AI US 1997-943464 19971003 (8)
RLI Continuation of Ser. No. US 1995-394464, filed on 27 Feb 1995, now abandoned which is a division of Ser. No. US 1993-147891, filed on 5 Nov 1993, now patented, Pat. No. US 5413931 which is a continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Elliott, George C.; Assistant Examiner: Schwartzman, Robert A.
LREP Fitch, Even, Tabin & Flannery
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 493

L13 ANSWER 6 OF 6 USPATFULL
AB A new isolate of **Ehrlichia** species has been obtained from a patient suffering from ehrlichiosis. The new isolate has been found to be similar, but distinctly different from E. **canis**. The new isolate is E. **chaffeensis** and is contained in a cell line of canine macrophage cells on deposit with the American Type Culture Collection under accession number CRL 10679. The new isolate must be contained in a cell line in order to remain viable but may be isolated from the cell line. However, the isolate will not remain viable outside of the cell line. A **diagnostic kit** and methods for diagnosing ehrlichiosis in humans and for screening drugs toxic to the new isolate have also been desclosed.
AN 95:40869 USPATFULL
TI **Ehrlichia** species from a patient suffering from ehrlichiosis
IN Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PA United States of America, Washington, DC, United States (U.S. government)
PI US 5413931 19950509
AI US 1993-147891 19931105 (8)
RLI Continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now

abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: Robinson, Douglas W.; Assistant Examiner: Ware, Deborah K.
LREP Needle & Rosenberg
CLMN Number of Claims: 4
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 376

3 ANSWER 1 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Herein we report on the first confirmed pediatric case of acute human granulocytic ehrlichiosis in Europe. Presentation in this 11-year-old girl was comparable to clinical findings seen in adult European patients with human granulocytic ehrlichiosis; i.e., she had self-limited febrile illness with leukopenia, thrombocytopenia, and elevated serum C-reactive protein concentration. It is of interest that the patient not only had a fourfold change in **antibody** titer to **Ehrlichia** phagocytophila but also developed **antibodies** to **Ehrlichia chaffeensis** and that her PCR test result was positive on the third as well as on the 22nd day after the onset of illness, that is, 16 days after spontaneous defervescence.
AN 2002:133478 BIOSIS
DN PREV200200133478
TI First European pediatric case of human granulocytic ehrlichiosis.
AU Arnez, Maja (1); Petrovec, Miroslav; Lotric-Furlan, Stanka; Zupanc, Tatjana Avsic; Strle, Franc
CS (1) Department of Infectious Diseases, University Medical Center, Japljeva 2, 1525, Ljubljana: maja.arnez@kclj.si Slovenia
SO Journal of Clinical Microbiology, (December, 2001) Vol. 39, No. 12, pp. 4591-4592. print.
ISSN: 0095-1137.
DT Article
LA English

L23 ANSWER 2 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Four white-tailed deer (Odocoileus virginianus) were inoculated intravenously with a deer-origin isolate (15B-WTD-GA) of **Ehrlichia chaffeensis**. The course of infection was monitored using indirect fluorescent **antibody** (IFA), polymerase chain reaction (PCR), and culture over a 9 m period. All deer became rickettsemic within 24 days post inoculation (DPI), and all developed **antibody** titers >1:64 to E. **chaffeensis** by 17 DPI. Titers in all deer fell below 1:64 during 87 to 143 DPI. One deer exhibited a second period of seropositivity (peak titer of 1:256) from 207 to 271 DPI but was culture and PCR negative during this period. Rickettsemia was confirmed by reisolation of E. **chaffeensis** as late as 73 to 108 DPI in three deer. Positive PCR results were obtained from femur bone marrow of one deer and from rumenal lymph node of another deer at 278 DPI. None of the deer developed clinical signs, hematologic abnormalities, or gross or microscopic lesions attributable to E. **chaffeensis**. Two uninoculated control deer were negative on all tests through 90 DPI at which time they were removed from the study. Herein we confirm that white-tailed deer become persistently infected with E. **chaffeensis**, have initial rickettsemias of several weeks duration and may experience recrudescence of rickettsemia, which reaffirm the importance of deer in the epidemiology of E. **chaffeensis**.
AN 2001:422366 BIOSIS
DN PREV200100422366
TI Persistent **Ehrlichia chaffeensis** infection in white-tailed deer.
AU Davidson, William R. (1); Lockhart, J. Mitchell; Stallknecht, David E.; Howerth, Elizabeth W.; Dawson, Jacqueline E.; Rechav, Yigal
CS (1) Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, The University of Georgia, Athens, GA, 30602 USA
SO Journal of Wildlife Diseases, (July, 2001) Vol. 37, No. 3, pp. 538-546. print.
ISSN: 0090-3558.
DT Article
LA English
SL English

L23 ANSWER 3 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB **Ehrlichia** canis causes a potentially fatal rickettsial disease

of dogs that requires rapid and accurate diagnosis in order to initiate appropriate therapy leading to a favorable prognosis. We recently reported the cloning of two immunoreactive E. canis proteins, P28 and P140, that were applicable for serodiagnosis of the disease. In the present study we cloned a new immunoreactive E. canis surface protein gene of 1,170 bp, which encodes a protein with a predicted molecular mass of 42.6 kDa (P43). The P43 gene was not detected in E. **chaffeensis** DNA by Southern blot, and antisera against recombinant P43 (rP43) did not react with E. **chaffeensis** as detected by indirect fluorescent **antibody** (IFA) assay. Forty-two dogs exhibiting signs and/or hematologic abnormalities associated with canine ehrlichiosis were tested by IFA assay and by recombinant Western immunoblot. Among the 22 samples that were IFA positive for E. canis, 100% reacted with rP43, 96% reacted with rP28, and 96% reacted with rP140. The specificity of the recombinant proteins compared to the IFAs was 96% for rP28, 88% for P43 and 63% for P140. The results of this study demonstrate that the rP43 and rP28 are sensitive and reliable serodiagnostic antigens for E. canis infections.

AN 2001:84427 BIOSIS
DN PREV200100084427
TI Immunodiagnosis of **Ehrlichia** canis infection with recombinant proteins.
AU McBride, Jere W.; Corstvet, Richard E.; Breitschwerdt, Edward B.; Walker, David H. (1)
CS (1) Department of Pathology, University of Texas Medical Branch, 301 University Blvd., Galveston, TX, 77555-0609: dwalker@utmb.edu USA
SO Journal of Clinical Microbiology, (January, 2001) Vol. 39, No. 1, pp. 315-322. print.
ISSN: 0095-1137.
DT Article
LA English
SL English

L23 ANSWER 4 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB **Ehrlichia chaffeensis** was sought among patients with a history of tick exposure and fever, and the accuracy of other diagnostic tests was compared with that of primary isolation. Among the 38 patients enrolled, E. **chaffeensis** was isolated from the blood of 7 (18%) and from cerebrospinal fluid specimens of 2 of these 7. All 7 patients also were positive by polymerase chain reaction (PCR) of blood, and 6 patients developed diagnostic titers of **antibody** to E. **chaffeensis**. The isolates were characterized by molecular analysis of the 16S rRNA gene, the 120-kDa protein gene, and the variable-length PCR target (VLPT) of E. **chaffeensis**. On the basis of the 120-kDa and VLPT genotypes, the cerebrospinal fluid and blood isolates from the same patients were identical. This study demonstrates that both PCR and culture of blood for E. **chaffeensis** have high diagnostic yields. More frequent isolation of E. **chaffeensis** from patients with infection should further our understanding of the pathogenesis of this infection.

AN 2000:182148 BIOSIS
DN PREV200000182148
TI Primary isolation of **Ehrlichia chaffeensis** from patients with febrile illnesses: Clinical and molecular characteristics.
AU Standaert, Steven M. (1); Yu, Tina; Scott, Margie A.; Childs, James E.; Paddock, Christopher D.; Nicholson, William L.; Singleton, Joseph, Jr.; Blaser, Martin J.
CS (1) Division of Infectious Diseases, Dept. of Medicine, Vanderbilt University School of Medicine, Nashville, TN, 37232-2637 USA
SO Journal of Infectious Diseases, (March, 2000) Vol. 181, No. 3, pp. 1082-1088.
ISSN: 0022-1899.
DT Article
LA English
SL English

L23 ANSWER 5 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Background: Little is known about the seroprevalence of ehrlichiosis in adults and much less about the same in children. Methods: One hundred and forty-three healthy children and young adults (6-24 years of age, male to female ratio, 1:1) were assessed for the presence of **antibodies** to the agents of human granulocytic ehrlichiosis (HGE), human monocytic ehrlichiosis (HME), Borrelia burgdorferi sensu stricto (BB), and tick-borne encephalitis (TBE) virus in Slovenia, where tick-related infections are endemic. **Antibodies** to HGE and HME agents were assayed by indirect immunofluorescence, and **antibodies** to BB and TBE by enzyme-linked immunosorbent assay. A questionnaire about tick exposure was answered by all subjects. In the event of a positive result, a detailed interview was conducted. Results: Of 143 study subjects, 22 (15.4%) had detectable **antibodies** to HGE agent, 22 (15.4%) were positive to BB, 18 (12.6%) were positive to TBE virus (12 of these were vaccinated) and 4 (2.8%) were positive to the HME agent. The history of persons seropositive to an HGE agent had been uneventful. Conclusions: Our study documents a high seroprevalence of HGE in children and young adults in Slovenia, similar to the seroprevalence of LB and higher than that of TBE and HME. Although the majority of these infections are probably asymptomatic or mild, active surveillance for acute HGE infections in children in areas endemic for tick-related infections is necessary.

AN 2001:99619 BIOSIS

DN PREV200100099619

TI Seroprevalence of ehrlichiosis, Lyme borreliosis and tick-borne encephalitis infections in children and young adults in Slovenia.

AU Cizman, Milan (1); Avsic-Zupanc, Tatjana; Petrovec, Miroslav; Ruzic-Sabljic, Eva; Pokorn, Marko (1)

CS (1) Department of Infectious Diseases, University Medical Center, Ljubljana Slovenia

SO Wiener Klinische Wochenschrift, (13 Oktober, 2000) Vol. 112, No. 19, pp. 842-845. print.
ISSN: 0043-5325.

DT Article

LA English

SL English

L23 ANSWER 6 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 1

AB **Antibodies** reactive with **Ehrlichia chaffeensis** were detected in raccoon (Procyon lotor) serum samples by using an indirect immunofluorescence assay. Samples from 411 raccoons trapped in the southeastern United States from 1977 to 1999 were tested. Serologically reactive samples with reciprocal titers of greater than or equal to 16 were detected from 83 raccoons (20%) from 13 of 16 counties in eight states, indicating that raccoons are commonly exposed to E. **chaffeensis**. Samples collected as early as 1977 were positive. A polymerase chain reaction assay specific for E. **chaffeensis** failed to detect the presence of ehrlichial DNA in serum samples from 20 representative seroreactive raccoons. Because of serologic cross-reactivity among antigens derived from different **Ehrlichia** spp., additional immunologic, molecular, or culture-based studies will be required to confirm E. **chaffeensis** infections of raccoons in the southeastern United States.

AN 2001:33299 LIFESCI

TI **Detection** of **antibodies** reactive with **Ehrlichia chaffeensis** in the raccoon

AU Comer, J.A.; Nicholson, W.L.; Paddock, C.D.; Sumner, J.W.; Childs, J.E.

CS Viral and Rickettsial Zoonoses Branch, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia 30333, USA; E-mail: jnc0@cdc.gov

SO Journal of Wildlife Diseases [J. Wildl. Dis.], (20001000) vol. 36, no. 4, pp. 705-712.
ISSN: 0090-3558.

DT Journal
FS J
LA English
SL English

L23 ANSWER 7 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Current **antibody** testing for human granulocytic ehrlichiosis relies predominantly on indirect fluorescent-**antibody** assays and immunoblot analysis. Shortcomings of these techniques include high cost and variability of test results associated with the use of different strains of antigens derived from either horses or cultured HL-60 cells. We used recombinant protein HGE-44, expressed and purified as a maltose-binding protein (MBP) fusion peptide, as an antigen in a polyvalent enzyme-linked immunosorbent assay (ELISA). Fifty-five normal serum samples from healthy humans served as a reference to establish cutoff levels. Thirty-three of 38 HGE patient serum samples (87%), previously confirmed by positive whole-cell immunoblotting, reacted positively in the recombinant ELISA. In specificity analyses, serum samples from patients with Lyme disease, syphilis, rheumatoid arthritis, and human monocytic ehrlichiosis (HME) did not react with HGE-44-MBP antigen, except for one sample (specificity, 98%). We conclude that recombinant HGE-44 antigen is a suitable antigen in an ELISA for the laboratory diagnosis and epidemiological study of HGE.
AN 1999:536578 BIOSIS
DN PREV199900536578
TI Serodiagnosis of human granulocytic ehrlichiosis by a recombinant HGE-44-based enzyme-linked immunosorbent assay.
AU Ijdo, Jacob W.; Wu, Caiyun; Magnarelli, Louis A.; Fikrig, Erol (1)
CS (1) Section of Rheumatology, Department of Internal Medicine, Yale University School of Medicine, 333 Cedar St., 608 Laboratory of Clinical Investigation, New Haven, CT, 06520-8031 USA
SO Journal of Clinical Microbiology, (Nov., 1999) Vol. 37, No. 11, pp. 3540-3544.
ISSN: 0095-1137.
DT Article
LA English
SL English

L23 ANSWER 8 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:339540 BIOSIS
DN PREV199900339540
TI 1997 and 1998 infection rates of Amblyomma americanum by **Ehrlichia chaffeensis** and prevalence of E. **chaffeensis**-reactive **antibodies** in white-tailed deer in southern Indiana.
AU Irving, R. P. (1); Steiner, F. E. (1); Pinger, R. R. (1); Vann, C. N. (1)
CS (1) Ball State University, Muncie, IN USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (1999) Vol. 99, pp. 233.
Meeting Info.: 99th General Meeting of the American Society for Microbiology Chicago, Illinois, USA May 30-June 3, 1999 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English

L23 ANSWER 9 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Background Human ehrlichiosis is a recently recognized tick-borne infection. Four species infect humans: **Ehrlichia chaffeensis**, E. sennetsu, E. canis, and the agent of human granulocytic ehrlichiosis. Methods We tested peripheral-blood leukocytes from 413 patients with possible ehrlichiosis by broad-range and species-specific polymerase-chain-reaction (PCR) assays for **ehrlichia**. The species present were identified by species-specific PCR assays and nucleotide sequencing of the gene encoding

ehrlichia 16S ribosomal RNA. Western blot analysis was used to study serologic responses. Results In four patients, **ehrlichia** DNA was detected in leukocytes by a broad-range PCR assay, but not by assays specific for E. **chaffeensis** or the agent of human granulocytic ehrlichiosis. The nucleotide sequences of these PCR products matched that of E. ewingii, an agent previously reported as a cause of granulocytic ehrlichiosis in dogs. These four patients, all from Missouri, presented betweenMay and August 1996, 1997, or 1998 with fever, headache, and thrombocytopenia, with or without leukopenia. All had been exposed to ticks, and three were receiving immunosuppressive therapy. Serum samples obtained from three of these patients during convalescence contained **antibodies** that reacted with E. **chaffeensis** and E. canis antigens in a pattern different from that of humans with E. **chaffeensis** infection but similar to that of a dog experimentally infected with E. ewingii. Morulae were identified in neutrophils from two patients. All four patients were successfully treated with doxycycline. Conclusions These findings provide evidence of E. ewingii infection in humans. The associated disease may be clinically indistinguishable from infection caused by E. **chaffeensis** or the agent of human granulocytic ehrlichiosis.

AN 1999:434994 BIOSIS
DN PREV199900434994
TI **Ehrlichia** ewingii, a newly recognized agent of human ehrlichiosis.
AU Buller, Richard S.; Arens, Max; Hmiel, S. Paul; Paddock, Christopher D.; Sumner, John W.; Rikihisa, Yasuko; Unver, Ahmet; Gaudreault-Keener, Monique; Manian, Farrin A.; Liddell, Allison M.; Schmulewitz, Nathan; Storch, Gregory A. (1)
CS (1) Department of Pediatrics, Division of Infectious Diseases, St. Louis Children's Hospital, 1 Children's Pl., St. Louis, MO, 63110 USA
SO New England Journal of Medicine, (July 15, 1999) Vol. 341, No. 3, pp. 148-155.
ISSN: 0028-4793.
DT Article
LA English
SL English

L23 ANSWER 10 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 2
AB A PCR assay of 43 acute-phase serum samples was evaluated as a method for early **detection** of human granulocytic ehrlichiosis (HGE) and determination of etiology when serologic testing is inconclusive. Sequence-confirmed products of the HGE agent were amplified from three individuals residing or having exposure history in Minnesota or Wisconsin, and similarly confirmed products from **Ehrlichia** **chaffeensis** were amplified from three individuals from Florida or Maryland. Etiology, as determined by PCR and serology, was the same whenever there was a fourfold difference between the maximum titers of **antibodies** to both antigens, indicating that presumptive determination of etiology may be based on fourfold differences in titers. PCR testing determined that E. **chaffeensis** was the etiologic agent for one individual who had similar titers of **antibodies** to both agents. PCR assay of acute-phase serum in the absence of whole blood specimens may be a useful method for early **detection** of human ehrlichiosis and determination of etiology when serologic testing is inconclusive.
AN 1999:45692 LIFESCI
TI Diagnosis of human ehrlichiosis by PCR assay of acute-phase serum
AU Comer, J.A.; Nicholson, W.L.; Sumner, J.W.; Olson, J.G.; Childs, J.E.
CS Viral and Rickettsial Zoonoses Branch, National Center for Infectious Diseases, Centers for Disease Control and Prevention, 1600 Clifton Rd., Mailstop G-13, Atlanta, GA 30333, USA; E-mail: jnc0@cdc.gov
SO Journal of Clinical Microbiology [J. Clin. Microbiol.], (19990100) vol. 37, no. 1, pp. 31-34.
ISSN: 0095-1137.

DT Journal
FS J; A
LA English
SL English

L23 ANSWER 11 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 3
AB Indirect fluorescent-**antibody** (IFA) staining methods with **Ehrlichia** equi (MRK or BDS strains) and Western blot analyses containing a human granulocytic ehrlichiosis (HGE) agent (NCH-1 strain) were used to confirm probable human cases of infection in Connecticut during 1995 and 1996. Also included were other tests for **Ehrlichia chaffeensis**, the agent of human monocytic ehrlichiosis (HME), Babesia microti, and Borrelia burgdorferi. Thirty-three (8.8%) of 375 patients who had fever accompanied by marked leukopenia or thrombocytopenia were serologically confirmed as having HGE. Western blot analyses of a subset of positive sera confirmed the results of the IFA staining methods for 15 (78.9%) of 19 seropositive specimens obtained from different persons. There was frequent **detection** of **antibodies** to a 44-kDa protein of the HGE agent. Serologic testing also revealed possible cases of Lyme borreliosis (n=142), babesiosis (n=41), and HME (n=21). Forty-seven (26.1%) of 180 patients had **antibodies** to two or more tick-borne agents. Therefore, when one of these diseases is clinically suspected or diagnosed, clinicians should consider the possibility of other current or past tick-borne infections.
AN 1999:28012 LIFESCI
TI Human exposure to a granulocytic **ehrlichia** and other tick-borne agents in Connecticut
AU Magnarelli, L.A.; Ijdo, J.W.; Anderson, J.F.; Padula, S.J.; Flavell, R.A.; Fikrig, E.
CS Department of Entomology, The Connecticut Agricultural Experiment Station, P.O. Box 1106, New Haven, CT 06504-1106, USA; E-mail: louis.magnarelli@po.state.ct.us
SO Journal of Clinical Microbiology, (19981000) vol. 36, no. 10, pp. 2823-2827.
ISSN: 0095-1137.
DT Journal
FS J
LA English
SL English

L23 ANSWER 12 OF 20 AGRICOLA DUPLICATE 4
AB The aims of the present study were (a) to determine the presence of Ixodes ricinus in three different areas of the National Park of Abruzzo; (b) to search for the presence of Borrelia burgdorferi in the collected sample of Ixodes; (c) to determine the seroprevalence of B. burgdorferi **antibodies** and E. **chaffeensis antibodies** in inhabitants of the park and in park workers. The presence of B. burgdorferi in Ixodes was checked by PCR. For the **detection** of **antibodies** to B. burgdorferi all sera were assayed by ELISA as screening test and by Western blot as confirmatory test. For the **detection** of **antibodies** to E. **chaffeensis** all sera were assayed by IFA. **Antibodies** to B. burgdorferi were present in 9.1% of the park workers, 4.5% were confirmed positive by the IgG Western blot test. None of the inhabitants of the park was positive. **Antibodies** against E. **chaffeensis** were found in 4.5% of the park workers and 8% of the inhabitants of the park. The results obtained in the collecting of the ticks seem to show that the presence of I. ricinus in the park territory is rather discontinuous and small in number, therefore it is not epidemiologically significant for the transmission of B. burgdorferi sensu lato. Serological study for **Ehrlichia** revealed a high frequency of E. **chaffeensis** **antibodies** in the park inhabitants and a lower prevalence in the park workers.
AN 1999:14540 AGRICOLA

DN IND21964916
TI Borrelia burgdorferi s.l. and **Ehrlichia chaffeensis** in the National Park of Abruzzo.
AU Santino, I.; Iori, A.; Sessa, R.; Sulli, C.; Favia, G.; Del Piano, M.
CS 'La Sapienza' University, Rome, Italy.
AV DNAL (QR1.F44)
SO FEMS microbiology letters, July 1, 1998. Vol. 164, No. 1. p. 1-6
Publisher: Amsterdam, The Netherlands : Elsevier Science B.V.
CODEN: FMLED7; ISSN: 0378-1097
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L23 ANSWER 13 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 5
AB Serological testing at the New York State Department of Health for human granulocytic ehrlichiosis in the residents of Westchester County, N.Y., was performed with specimens from 176 patients by the indirect fluorescent-**antibody** (IFA) technique with **Ehrlichia** equi MRK-infected neutrophils. To understand whether human monocytotropic ehrlichiosis also occurs in this northeastern geographic region, specimens were also tested for **antibodies** to **Ehrlichia** **chaffeensis** Arkansas. Screening tests and immunoblots for Lyme disease (Borrelia burgdorferi infection) were also performed. Thirty-two patients had **antibodies** only to E. equi and 21 patients had **antibodies** to both E. equi and E. **chaffeensis** whereas 12 patients had only E. **chaffeensis** **antibodies** by the IFA technique. The remaining patients did not have **antibodies** to either **ehrlichia**. Eighteen serum samples from 13 of these patients were coded and sent to the **Ehrlichia** Research Laboratory (Baltimore, Md.) for repeat analysis by the IFA test and for E. equi and E. **chaffeensis** immunoblots. Immunoblot analysis for E. equi in samples with positive IFA test results confirmed the results for eight of the nine specimens. Immunoblot analyses for E. **chaffeensis** were negative for all 18 serum samples. Borrelia-reactive **antibodies** were found in sera both from patients with granulocytic ehrlichiosis and from patients with monocytotropic ehrlichiosis from New York State. Our results suggest that E. equi antigen is an appropriate substrate for identifying human granulocytic ehrlichiosis. E. **chaffeensis** antigen lacks appropriate sensitivity to serve as a surrogate substrate for the **detection** of human granulocytic ehrlichiosis and should be used solely for the diagnosis of human monocytotropic ehrlichiosis. Heat shock proteins may, in some cases, cause cross-reactivity between B. burgdorferi and ehrlichiae.
AN 1998:18364 LIFESCI
TI Serological responses to **Ehrlichia** equi, **Ehrlichia** **chaffeensis**, and Borrelia burgdorferi in patients from New York state
AU Wong, S.J.; Brady, G.S.; Dumler, J.S.
CS Wadsworth Cent., New York State Dep. Health, P.O. Box 22002, Albany, NY 12201, USA
SO J. CLIN. MICROBIOL., (19970900) vol. 35, no. 9, pp. 2198-2205.
ISSN: 0095-1137.
DT Journal
FS J
LA English
SL English

L23 ANSWER 14 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 6
AB A partial 16S rRNA gene was amplified in **Ehrlichia** canis-infected cells by nested PCR. The assay was specific and did not amplify the closely related **Ehrlichia chaffeensis**,

Ehrlichia muris, Neorickettsia helminthoeca, and SF agent 16S rRNA genes. The assay was as sensitive as Southern hybridization, detecting as little as 0.2 pg of E. canis DNA. By this method, all blood samples from four dogs experimentally infected with E. canis were positive as early as day 4 postinoculation, which was before or at the time of seroconversion. One hundred five blood samples from dogs from Arizona and Texas (areas of E. canis endemicity) and 30 blood samples from dogs from Ohio (area of E. canis nonendemicity) were examined by nested PCR and immunofluorescent-**antibody** (IFA) test. Approximately 84% of dogs from Arizona and Texas had been treated with doxycycline before submission of blood specimens. Among Arizona and Texas specimens, 46 samples were PCR positive (44%) and 80 were IFA positive (76%). Forty-three of 80 IFA-positive samples (54%) were PCR positive, and 22 of 25 IFA-negative samples (88%) were negative in the nested PCR. None of the Ohio specimens were IFA positive, but 5 specimens were PCR positive (17%). Our results indicate that the nested PCR is highly sensitive and specific for **detection** of E. canis and may be more useful in assessing the clearance of the organisms after antibiotic therapy than IFA, especially in areas in which E. canis is endemic.

AN 97:96297 LIFESCI

TI Comparison of nested PCR with immunofluorescent-**antibody** assay for **detection** of **Ehrlichia** canis infection in dogs treated with doxycycline

AU Wen, B.; Rikihisa, Y.*; Mott, J.M.; Greene, R.; Kim, H.-Y.; Zhi, N.; Couto, G.C.; Unver, A.; Bartsch, R.

CS Department of Veterinary Biosciences, College of Veterinary Medicine, Ohio State University, 1925 Coffey Rd., Columbus, OH 43210-1096, USA

SO J. CLIN. MICROBIOL., (1997) vol. 35, no. 7, pp. 1852-1855. ISSN: 0095-1137.

DT Journal

FS J; A

LA English

SL English

L23 ANSWER 15 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 7

AB In order to evaluate the relative sensitivity of the **detection** of **antibodies** against various antigenic proteins of **Ehrlichia chaffeensis** for the diagnosis of the emerging infectious disease human monocytotropic ehrlichiosis, Western immunoblotting was performed with 27 serum samples from convalescent patients with **antibodies**, as demonstrated by indirect immunofluorescence assay. Among 22 patients with **antibodies** reactive with the 120-kDa protein, 15 showed reactivity with the 29/28-kDa protein(s) and the proteins in the 44- to 88-kDa range. Two of the serum samples with this pattern reacted with the 29/28-kDa protein(s) of only the 91HE17 strain, and one sample reacted with only that of the Arkansas strain, indicating that the **antibodies** were stimulated by strain-specific epitopes. Overall, **antibodies** to the 29/28-kDa protein(s) were detected in only 16 patients' sera, suggesting that this protein is less sensitive than the 120-kDa protein. Two of 12 serum samples from healthy blood donors had **antibodies** reactive with the 120-kDa protein; one of these samples reacted also with the 29/28-kDa protein(s) of **Ehrlichia** canis, suggesting that unrecognized ehrlichial infection might have occurred, including human infection with E. canis. A high correlation between reactivity with the 120-kDa protein by Western immunoblotting and the recombinant 120-kDa protein by dot blot supports the potential usefulness of this recombinant antigen in diagnostic serology.

AN 1998:38151 LIFESCI

TI Western immunoblotting analysis of the **antibody** responses of patients with human monocytotropic ehrlichiosis to different strains of **Ehrlichia chaffeensis** and **Ehrlichia** canis

AU Chen, Sheng-Min; Cullman, L.C.; Walker, D.H.

CS Dep. Pathol., Univ. Texas Med. Branch, 301 University Blvd., Galveston, TX

77555-0609, USA
SO CLIN. DIAGN. LAB. IMMUNOL., (19971100) vol. 4, no. 6, pp. 731-735.
ISSN: 1071-412X.
DT Journal
FS J; F
LA English
SL English

L23 ANSWER 16 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 8
AB The role of white-tailed deer (Odocoileus virginianus) in the epidemiology of **Ehrlichia chaffeensis** and the agent of human granulocytic ehrlichiosis (HGE) is not fully understood, and diagnostic procedures may be complicated by the recent **detection** of 16S rDNA sequence from an **Ehrlichia** sp.-like organism in wild deer. A specific forward primer (DGA) and an **Ehrlichia** spp. reverse primer (GA1UR) were constructed to amplify this new, distinct **Ehrlichia** sp.-like 16S rDNA. The DGA primer, a forward primer specific for E. **chaffeensis** (DCH), and a forward primer specific for the E. phagocytophila genogroup (GE9f) were each used with GA1UR in nested polymerase chain reactions to amplify 16S rDNA sequences from control samples containing the deer **Ehrlichia** sp.-like organism, E. **chaffeensis**, or the HGE agent. Primer pairs DGA/GA1UR and DCH/GA1UR specifically amplified 16S rDNA sequences from the corresponding target organism, whereas GE9f/GA1UR amplified 16S rDNA sequence from both the HGE agent and the deer **Ehrlichia** sp.-like organism. With a nested PCR using DGA/GA1UR and DCH/GA1UR on DNA extracted from white blood cells from 62 deer from 10 populations in four U.S. states, we observed a high prevalence (65%) of 16S rDNA sequences of the deer **Ehrlichia** sp.-like organism, and a low prevalence (5%) of the E. **chaffeensis** sequence. In this field survey, E. **chaffeensis**-reactive **antibodies** detected by indirect fluorescence assays were associated ($P < 0.001$) with PCR evidence of the deer **Ehrlichia** sp.-like organism, but not E. **chaffeensis**. Infestations of Amblyomma americanum also were associated ($P < 0.001$) with PCR evidence of the deer **Ehrlichia** sp.-like organism. The potential for serologic cross-reactions and non-specific PCR products arising from the deer **Ehrlichia** sp.-like organism should be considered when evaluating the role of deer and their ticks in the epidemiology of ehrlichial pathogens of humans.
AN 97:96283 LIFESCI
TI Development and use of specific polymerase reaction for the **detection** of an organism resembling **Ehrlichia** sp. in white-tailed deer
AU Little, S.E.; Dawson, J.E.; Lockhart, J.M.; Stallknecht, D.E.; Warner, C.K.; Davidson, W.R.
CS Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, The University of Georgia, Athens, GA 30602, USA
SO J. WILDL. DIS., (1997) vol. 33, no. 2, pp. 246-253.
ISSN: 0090-3558.
DT Journal
FS J
LA English
SL English

L23 ANSWER 17 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 9
AB DNA encoding two repeat units of the 120-kDa protein of **Ehrlichia chaffeensis** was cloned into the expression vector pGEX and expressed in Escherichia coli. The sensitivity and specificity of a dot blot assay for **detection** of human **antibodies** with the recombinant protein were 86 and 100%, respectively, compared with an indirect immunofluorescence assay.
AN 97:9776 LIFESCI
TI The recombinant 120-kilodalton protein of **Ehrlichia chaffeensis**, a potential diagnostic tool

AU Yu, Xue-Jie; Crocquet-Valdes, P.; Cullman, L.C.; Walker, D.H.*
CS Dep. Pathol., Univ. Texas Med. Branch, 301 Univ. Blvd., Galveston, TX 77555-0609, USA
SO J. CLIN. MICROBIOL., (1996) vol. 34, no. 11, pp. 2853-2855. ISSN: 0095-1137.
DT Journal
FS J
LA English
SL English

L23 ANSWER 18 OF 20 AGRICOLA DUPLICATE 10
AB Ixodid ticks were collected from Connecticut, Massachusetts, Missouri, Pennsylvania, Rhode Island, and British Columbia (Canada) during 1991 to 1994 to determine the prevalence of infection with hemocytic (blood cell), rickettsia-like organisms. Hemolymph obtained from these ticks was analyzed by direct and indirect fluorescent **antibody** (FA) staining methods with dog, horse, or human sera containing **antibodies** to **Ehrlichia** canis, **Ehrlichia** equi, or Rickettsia rickettsii. Of the 693 nymphal and adult Amblyomma americanum, Dermacentor variabilis, Ixodes scapularis, and Ixodes pacificus ticks tested with dog anti-E. canis antiserum, 209 (32.5%) contained hemocytic bacteria. The prevalence of infected ticks varied greatly with species and locale. In parallel tests of duplicate hemolymph preparations from adult I. scapularis ticks, the hemocytic organisms reacted positively with E. canis and/or E. equi antisera, including sera from persons who had granulocytic ehrlichiosis. In separate PCR analyses, DNA of the agent of human granulocytic ehrlichiosis was detected in 59 (50.0%) of 118 adult and in 1 of 2 nymphal I. scapularis ticks tested from Connecticut. There was no evidence of **Ehrlichia chaffeensis** DNA in these ticks. In indirect FA tests of hemolymph for spotted fever group rickettsiae, the overall prevalence of infection was less than 4%. Specificity tests of antigens and antisera used in these studies revealed no cross-reactivity between E. canis and E. equi or between any of the ehrlichial reagents and those of R. rickettsii. The geographic distribution of hemocytic microorganisms with shared antigens to **Ehrlichia** species or spotted fever group rickettsiae is widespread.
AN 97:25605 AGRICOLA
DN IND20557794
TI Hemocytic rickettsia-like organisms in ticks: serologic reactivity with antisera to ehrlichiae and **detection** of DNA of agent of human granulocytic ehrlichiosis by PCR.
AU Magnarelli, L.A.; Stafford, K.C. III; Mather, T.N.; Yeh, M.T.; Horn, K.D.; Dumler, J.S.
CS The Connecticut Agricultural Experiment Station, New Haven, CT.
AV DNAL (QR46.J6)
SO Journal of clinical microbiology, Oct 1995. Vol. 33, No. 10. p. 2710-2714 Publisher: Washington : American Society for Microbiology, CODEN: JCMIDW; ISSN: 0095-1137
NTE Includes references
CY District of Columbia; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L23 ANSWER 19 OF 20 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Objective: To characterize the clinical presentation and course, laboratory findings, and treatment outcome of 12 patients with human granulocytic ehrlichiosis. Setting: The 12 patients were male, ranged in age from 29 to 91 years, and contracted their illness in Wisconsin or Minnesota. Methods: Cases were recognized by the presence of intracytoplasmic inclusions (morulae) in peripheral neutrophils of patients presenting with temperature of 38.5 degree C or higher, chills, severe headache, and myalgias. All patients had a complete blood cell

count and blood chemistry profile. Blood smears were examined by light microscopy. All available paired serum samples were analyzed for presence of indirect fluorescent **antibodies** against **Ehrlichia chaffeensis**, **Ehrlichia** phagocytophila, and **Ehrlichia** equi. Blood samples from 12 patients were subjected to polymerase chain reaction analysis using primers specific for the E. phagocytophilal/E. equi group, primers that include the agent identified in our patients. as well as E. **chaffeensis**. Results: Varying combinations of leukopenia, anemia, and thrombocytopenia were found in all but one patient. All 12 patients demonstrated morulae in the cytoplasm of neutrophils, but not in mononuclear white blood cells. Serum assays failed to detect **antibodies** against E. **chaffeensis**, but eight of 10 patients and seven of 10 patients tested had **antibody** titers of 1:80 or more for E. phagocytophila and E. equi, respectively. Polymerase chain reaction products obtained with primers for E. phagocytophila, E. equi, and the granulocytotropic **Ehrlichia** revealed that seven patients were infected with the same agent. The results of serological assays or polymerase chain reaction strongly suggest that all 12 patients were infected by E. phagocytophila, E. equi, or a closely related **Ehrlichia** species. Two of the 12 patients died. The other 10 patients improved rapidly with oral doxycycline treatment Conclusions: We believe that all 12 patients have been infected with a granulocytic **Ehrlichia** species, reflecting a recently described new disease entity. The infective organism appears to be closely related to E. phagocytophila and E equi. The geographic domain of human granulocytic ehrlichiosis is currently unknown. This novel granulocytic **Ehrlichia** species is capable of causing fatal infections in humans. Early **detection** and treatment with tetracycline drugs appear to offer the best chance for complete recovery.

AN 1994:392240 BIOSIS
DN PREV199497405240
TI Human granulocytic Ehrlichiosis in the upper midwest United States: A new species emerging.
AU Bakken, Johan S. (1); Dumler, J. Stephen; Chen, Sheng-Min; Eckman, Mark R.; Van Etta, Linda L.; Walker, David H.
CS (1) Sect. Infectious Disease, Duluth Clinic Ltd., 400 E. Third Street, Duluth, MN 55805 USA
SO JAMA (Journal of the American Medical Association), (1994) Vol. 272, No. 3, pp. 212-218.
ISSN: 0098-7484.
DT Article
LA English

L23 ANSWER 20 OF 20 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 11
AB A mouse monoclonal **antibody** (MAb 1A9) was produced and used in **detection** of **Ehrlichia chaffeensis** in human tissues including kidney, liver, and lung by using an indirect immunohistologic stain. MAb 1A9 was specific to E. **chaffeensis** and did not react with other bacteria, including **Ehrlichia** canis, which is the organism most closely related to E. **chaffeensis**. It reacted with an epitope present in two surface proteins of E. **chaffeensis** with molecular masses of 29 and 27 kDa. E. **chaffeensis** was easily detected in human tissue by immunohistology with MAb 1A9. This study demonstrates that our MAb can provide a specific and simple method for **detection** of E. **chaffeensis** in clinical specimens for establishing an etiologic diagnosis of human ehrlichiosis; it may also provide a tool for the investigation of immunopathologic characteristics in infected patients.
AN 94:29491 LIFESCI
TI **Detection** of **Ehrlichia chaffeensis** in human tissue by using a species-specific monoclonal **antibody**
AU Yu, Xuejie; Brouqui, P.; Dumler, J.S.; Raoult, D.*
CS Unite Rickettsies, Fac. Med., 27 Blvd. Jean Moulin, 13385 Marseille, France

SO J. CLIN. MICROBIOL., (1993) vol. 31, no. 12, pp. 3284-3288.
ISSN: 0095-1137.
DT Journal
FS J; F; W3
LA English
SL English

=>

L22 ANSWER 1 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The major antigenic protein 2 (MAP2) of **Ehrlichia canis** was cloned and expressed. The recombinant protein was characterized and tested in an enzyme-linked immunosorbent assay (ELISA) format for potential application in the serodiagnosis of canine monocytic ehrlichiosis. The recombinant protein, which contained a C-terminal polyhistidine tag, had a molecular mass of approximately 26 kDa. The antigen was clearly identified by Western immunoblotting using antihistidine **antibody** and immune serum from an experimentally infected dog. The recombinant MAP2 (rMAP2) was tested in an ELISA format using 141 serum samples from E. **canis** immunofluorescent **antibody** (IFA)-positive and IFA-negative dogs. Fifty-five of the serum samples were from dogs experimentally or naturally infected with E. **canis** and were previously demonstrated to contain **antibodies** reactive with E. **canis** by indirect immunofluorescence assays. The remaining 86 samples, 33 of which were from dogs infected with microorganisms other than E. **canis**, were seronegative. All of the samples from experimentally infected animals and 36 of the 37 samples from naturally infected animals were found to contain **antibodies** against rMAP2 of E. **canis** in the ELISA. Only 3 of 53 IFA-negative samples tested positive on the rMAP2 ELISA. There was 100% agreement among IFA-positive samples from experimentally infected animals, 97.3% agreement among IFA-positive samples from naturally infected animals, and 94.3% agreement among IFA-negative samples, resulting in a 97.2% overall agreement between the two assays. These data suggest that rMAP2 of E. **canis** could be used as a recombinant test antigen for the serodiagnosis of canine monocytic ehrlichiosis.
AN 2001:411566 BIOSIS
DN PREV200100411566
TI Recombinant major antigenic protein 2 of **Ehrlichia canis** : A potential diagnostic tool.
AU Alleman, A. Rick (1); McSherry, Leo J.; Barbet, Anthony F.; Breitschwerdt, Edward B.; Sorenson, Heather L.; Bowie, Michael V.; Belanger, Myriam
CS (1) Department of Physiological Sciences, College of Veterinary Medicine, University of Florida, Gainesville, FL, 32610: ALLEMANR@MAIL.VETMED.UFL.EDU USA
SO Journal of Clinical Microbiology, (July, 2001) Vol. 39, No. 7, pp. 2494-2499. print.
ISSN: 0095-1137.
DT Article
LA English
SL English

=> d ab bib l22 1-36

L22 ANSWER 1 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The major antigenic protein 2 (MAP2) of **Ehrlichia canis** was cloned and expressed. The recombinant protein was characterized and tested in an enzyme-linked immunosorbent assay (ELISA) format for potential application in the serodiagnosis of canine monocytic ehrlichiosis. The recombinant protein, which contained a C-terminal polyhistidine tag, had a molecular mass of approximately 26 kDa. The antigen was clearly identified by Western immunoblotting using antihistidine **antibody** and immune serum from an experimentally infected dog. The recombinant MAP2 (rMAP2) was tested in an ELISA format using 141 serum samples from E. **canis** immunofluorescent **antibody** (IFA)-positive and IFA-negative dogs. Fifty-five of the serum samples were from dogs experimentally or naturally infected with E. **canis** and were previously demonstrated to contain **antibodies** reactive with E. **canis** by indirect immunofluorescence assays. The remaining 86 samples, 33 of which were from dogs infected with microorganisms other than E. **canis**, were seronegative. All of the samples from experimentally infected animals and

36 of the 37 samples from naturally infected animals were found to contain **antibodies** against rMAP2 of E. **canis** in the ELISA. Only 3 of 53 IFA-negative samples tested positive on the rMAP2 ELISA. There was 100% agreement among IFA-positive samples from experimentally infected animals, 97.3% agreement among IFA-positive samples from naturally infected animals, and 94.3% agreement among IFA-negative samples, resulting in a 97.2% overall agreement between the two assays. These data suggest that rMAP2 of E. **canis** could be used as a recombinant test antigen for the serodiagnosis of canine monocytic ehrlichiosis.

AN 2001:411566 BIOSIS
DN PREV200100411566
TI Recombinant major antigenic protein 2 of **Ehrlichia canis** : A potential diagnostic tool.
AU Alleman, A. Rick (1); McSherry, Leo J.; Barbet, Anthony F.; Breitschwerdt, Edward B.; Sorenson, Heather L.; Bowie, Michael V.; Belanger, Myriam
CS (1) Department of Physiological Sciences, College of Veterinary Medicine, University of Florida, Gainesville, FL, 32610: ALLEMANR@MAIL.VETMED.UFL.EDU USA
SO Journal of Clinical Microbiology, (July, 2001) Vol. 39, No. 7, pp. 2494-2499. print.
ISSN: 0095-1137.
DT Article
LA English
SL English

L22 ANSWER 2 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB **Ehrlichia canis** causes a potentially fatal rickettsial disease of dogs that requires rapid and accurate diagnosis in order to initiate appropriate therapy leading to a favorable prognosis. We recently reported the cloning of two immunoreactive E. **canis** proteins, P28 and P140, that were applicable for serodiagnosis of the disease. In the present study we cloned a new immunoreactive E. **canis** surface protein gene of 1,170 bp, which encodes a protein with a predicted molecular mass of 42.6 kDa (P43). The P43 gene was not detected in E. chaffeensis DNA by Southern blot, and antisera against recombinant P43 (rP43) did not react with E. chaffeensis as detected by indirect fluorescent **antibody** (IFA) assay. Forty-two dogs exhibiting signs and/or hematologic abnormalities associated with canine ehrlichiosis were tested by IFA assay and by recombinant Western immunoblot. Among the 22 samples that were IFA positive for E. **canis**, 100% reacted with rP43, 96% reacted with rP28, and 96% reacted with rP140. The specificity of the recombinant proteins compared to the IFAs was 96% for rP28, 88% for P43 and 63% for P140. The results of this study demonstrate that the rP43 and rP28 are sensitive and reliable serodiagnostic antigens for E. **canis** infections.

AN 2001:84427 BIOSIS
DN PREV200100084427
TI Immunodiagnosis of **Ehrlichia canis** infection with recombinant proteins.
AU McBride, Jere W.; Corstvet, Richard E.; Breitschwerdt, Edward B.; Walker, David H. (1)
CS (1) Department of Pathology, University of Texas Medical Branch, 301 University Blvd., Galveston, TX, 77555-0609: dwalker@utmb.edu USA
SO Journal of Clinical Microbiology, (January, 2001) Vol. 39, No. 1, pp. 315-322. print.
ISSN: 0095-1137.
DT Article
LA English
SL English

L22 ANSWER 3 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 1
AB Immunoglobulin (Ig) G subclasses were measured in dogs naturally and experimentally infected with **Ehrlichia canis** using enzyme-linked immunosorbant assay (ELISA). In this study, a higher IgG2

subclass response was noticed to natural and experimental E. **canis** infection in dogs. Anti-E. **canis**-IgG2 optic density (OD) values were found to be significantly higher than anti-E. **canis**-IgG1 during the different phases of the disease, and no differences in the IgG subclass responses to E. **canis** infection were found between symptomatic and asymptomatic dogs. Doxycycline treatment, which eliminated the rickettsia in three of four persistently infected dogs, had no noticeable influence on the E. **canis**-IgG subclass OD values during the treatment period. In order to facilitate the study, an ELISA for the **detection** of anti-E. **canis** IgG was developed and was shown to be sensitive and specific for E. **canis**-IgG, and in a significant correlation with the indirect immunofluorescence **antibody** test.

AN 2002:14723 LIFESCI
TI Dynamics of IgG1 and IgG2 subclass response in dogs naturally and experimentally infected with **Ehrlichia canis**
AU Harrus, S.; Waner, T.; Strauss-Ayali, D.; Bark, H.; Jongejan, F.; Hecht, G.; Baneth, G.
CS Department of Clinical Sciences, School of Veterinary Medicine, Hebrew University of Jerusalem, PO Box 12, 76100 Rehovot, Israel; E-mail: harrus@agri.huji.ac.il
SO Veterinary Parasitology [Vet. Parasitol.], (20010700) vol. 99, no. 1, pp. 63-71.
ISSN: 0304-4017.
DT Journal
FS J
LA English
SL English

L22 ANSWER 4 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 2
AB Dogs are susceptible to a number of ehrlichial diseases. Among them, canine monocytic ehrlichiosis is an important and potentially fatal disease of dogs caused by the rickettsia **Ehrlichia canis** . Diagnosis of the disease relies heavily on the **detection** of **antibodies** and is usually carried out using the indirect immunofluoresence **antibody** (IFA) test. The IFA test may be confounded by cross-reactivities between a number of the canine ehrlichial pathogens. This article presents a review of the ehrlichial diseases affecting dogs with reference to their immune responses, host specificities, cross-reactivites and diagnosis. Diagnostic means such as Western immunblot, dot-blot and PCR are discussed. The use of the IFA test as a diagnostic means for E. **canis** is presented along with its potential pitfalls. The review emphasizes that the disease process, cross-reactivites with other ehrlichial species, multiple tick-borne infections and persistent IFA **antibody** titers post-treatment, should all be considered when interpreting E. **canis** serological results.
AN 2001:35309 LIFESCI
TI Significance of serological testing for ehrlichial diseases in dogs with special emphasis on the diagnosis of canine monocytic ehrlichiosis caused by **Ehrlichia canis**
AU Waner, T.; Harrus, S.; Jongejan, F.; Bark, H.; Keysary, A.; Cornelissen, A.W.C.A.
CS Israel Institute for Biological Research, P.O. Box 19,, Ness Ziona 70400, Israel
SO Veterinary Parasitology [Vet. Parasitol.], (20010205) vol. 95, no. 1, pp. 1-15.
ISSN: 0304-4017.
DT Journal
FS J
LA English
SL English

L22 ANSWER 5 OF 36 PHIN COPYRIGHT 2002 PJB

AN 2000:14662 PHIN
DN P00675438
DED 25 Aug 2000
TI Megacor launches two test kits
SO Animal-Pharm (2000) No. 451 p22
DT Newsletter
FS FULL

L22 ANSWER 6 OF 36 PHIN COPYRIGHT 2002 PJB

AN 2000:13539 PHIN
DN P00672990
DED 21 Jul 2000
TI Synbiotics' Witness **Ehrlichia** in Europe
SO Animal-Pharm (2000) No. 449 p22
DT Newsletter
FS BRIEF

L22 ANSWER 7 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:225683 BIOSIS
DN PREV200100225683
TI Standardization of the diagnostic criteria for canine ehrlichiosis: Towards a universal case definition.
AU Kakoma, Ibulaimu (1); Sainz, Angel; Tesouro, Miguel; Amusategui, Inmaculada; Kim, Chang-Hyun; Biggerstaff, Jane; McPeak, John; Levy, M. G.
CS (1) Department of Veterinary Pathobiology, University of Illinois, 2001 Lincoln Avenue, Urbana, IL, 61802: i.kakoma@staff.uiuc.edu USA
SO Society for Tropical Veterinary Medicine. Annals of the New York Academy of Sciences, (December, 2000) Vol. 916, pp. 396-403. Annals of the New York Academy of Sciences. Tropical veterinary diseases: Control and prevention in the context of the new world order. print.
Publisher: New York Academy of Sciences 2 East 63rd Street, New York, NY, 10021, USA.
Meeting Info.: Fifth Biennial Conference of the Society for Tropical Veterinary Medicine Key West, Florida, USA June 12-16, 1999
ISSN: 0077-8923. ISBN: 1-57331-281-9 (cloth), 1-57331-282-7 (paper).
DT Book; Conference
LA English
SL English

L22 ANSWER 8 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB In order to determine the role of coyotes in the epidemiology of granulocytic and monocytic ehrlichial agents in California (USA), we tested 149 serum samples for **antibodies** against **Ehrlichia** equi, E. risticii, and E. **canis**, using an indirect immunofluorescent **antibody** test. Polymerase chain reaction (PCR) assay was used to survey for the presence of members of the E. phagocytophila genogroup, E. risticii and E. **canis** in blood samples of 95 coyotes. Sixty-eight (46%) samples were seropositive for E. equi, two (1%) for E. risticii and none of the samples had **antibodies** reactive to E. **canis**. Two and one coyote were positive for E. risticii and members of the E. phagocytophila genogroup by PCR assay, respectively. In contrast, the 95 samples were negative for E. **canis** by PCR. Ninety-five percent of the 68 E. equi seropositive coyotes and the one coyote PCB positive for members of the E. phagocytophila genogroup originated from a coastal area. However, the two E. risticii seropositive coyotes and the two coyotes PCR positive for E. risticii were from northern California. Sequence analysis of the three amplified PCR products revealed the agent to be similar in two coyotes to the sequences of E. risticii from horses originating from northern California and identical in one coyote to the agent of human granulocytic ehrlichiosis and E. equi from California. Thus, coyotes are exposed to granulocytic ehrlichiae and E. risticii and may play a role in the

epidemiology of these ehrlichial agents in California.
AN 2001:306908 BIOSIS
DN PREV200100306908
TI Serologic and molecular evidence of **Ehrlichia** spp. in coyotes in California.
AU Pusterla, Nicola (1); Chang, Chao-Chin; Chomel, Bruno B.; Chae, Joon-Seok; Foley, Janet E.; DeRock, Elfriede; Kramer, Vicki L.; Lutz, Hans; Madigan, John E.
CS (1) Department of Medicine and Epidemiology, School of Veterinary Medicine, University of California, Davis, CA, 95616: npusterla@ucdavis.edu USA
SO Journal of Wildlife Diseases, (July, 2000) Vol. 36, No. 3, pp. 494-499. print.
ISSN: 0090-3558.
DT Article
LA English
SL English

L22 ANSWER 9 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB **Antibodies** against the 24 kDa Rhipicephalus sanguineus (Rs24p) protein were detected by ELISA to evaluate the relationship between **antibodies** and tick infestation. The mean titer of 3 dogs that underwent 2 experimental infestations with adult ticks was transiently increased after the second infestation. There was a significant difference in mean titers between positive control dogs naturally infested with ticks and tick-naive dogs. These results suggested that anti-Rs24p **antibodies** detected by ELISA are a marker of tick exposure. There was no significant difference in mean titers between tick-naive dogs and seropositive dogs to **Ehrlichia canis**. Some dogs positive for E. **canis antibodies** showed, however, higher titers than most tick-naive dogs. R. sanguineus may be related to the E. **canis** infection in Japan.
AN 2000:336249 BIOSIS
DN PREV200000336249
TI Is the **detection** of anti-Rhipicephalus sanguineus (Rs24p) **antibodies** a valuable epidemiological tool of tick infestation in dogs.
AU Inokuma, Hisashi (1); Ohno, Koichi; Onishi, Takafumi
CS (1) Faculty of Agriculture, Yamaguchi University, 1677-1 Yoshida, Yamaguchi, 753-8515 Japan
SO Veterinary Research (Paris), (May June, 2000) Vol. 31, No. 3, pp. 365-369. print.
ISSN: 0928-4249.
DT Article
LA English
SL English; French

L22 ANSWER 10 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 3
AB Six dogs were infected with **Ehrlichia canis** by intravenous injection of heavily infected DH82 cells. All dogs developed typical signs of canine monocytic ehrlichiosis. Using flow cytometric technology, platelet-bound IgG (PBIgG) were detected in 5 of the 6 dogs after experimental infection with E. **canis** over a period of 3-10 days post infection (PI). The first **detection** of PBIgG was made as early as day 3 PI in 2 out of 6 dogs, and on day 5 PI in 1 dog. On day 7 PI, PBIgG was detected in 2 dogs, and on day 10 PI in 3 out of 6 dogs. This is the first report documenting the presence of PBIgG following E. **canis** infection in dogs. This finding further supports the theory that the thrombocytopenia seen in canine monocytic ehrlichiosis has an immunological component and that exposure to an infectious agent, in this case the rickettsia E. **canis**, can trigger autoimmune mechanisms. Due to the heterogenous appearance of PBIgG among the infected dogs it was concluded that other non-immunological mechanisms are probably also involved in the pathogenesis of the thrombocytopenia seen in canine

monocytic ehrlichiosis.
AN 2001:22750 LIFESCI
TI **Detection** of platelet-bound **antibodies** in beagle dogs after artificial infection with **Ehrlichia canis**
AU Waner, T.; Leykin, I.; Shinitsky, M.; Sharabani, E.; Buch, H.; Keysary, A.; Bark, H.; Harrus, S.
CS Israel Institute for Biological Research, PO Box 19, Ness Ziona Israel
SO Veterinary Immunology and Immunopathology [Vet. Immunol. Immunopathol.], (20001123) vol. 77, no. 1-2, pp. 145-150.
ISSN: 0165-2427.
DT Journal
FS J; F
LA English
SL English

L22 ANSWER 11 OF 36 AGRICOLA
AB Six dogs were infected with **Ehrlichia canis** by intravenous injection of heavily infected DH82 cells. All dogs developed typical signs of canine monocytic ehrlichiosis. Using flow cytometric technology, platelet-bound IgG (PBIgG) were detected in 5 of the 6 dogs after experimental infection with E. **canis** over a period of 3-10 days post infection (PI). The first **detection** of PBIgG was made as early as day 3 PI in 2 out of 6 dogs, and on day 5 PI in 1 dog. On day 7 PI, PBIgG was detected in 2 dogs, and on day 10 PI in 3 out of 6 dogs. This is the first report documenting the presence of PBIgG following E. **canis** infection in dogs. This finding further supports the theory that the thrombocytopenia seen in canine monocytic ehrlichiosis has an immunological component and that exposure to an infectious agent, in this case the rickettsia E. **canis**, can trigger autoimmune mechanisms. Due to the heterogenous appearance of PBIgG among the infected dogs it was concluded that other non-immunological mechanisms are probably also involved in the pathogenesis of the thrombocytopenia seen in canine monocytic ehrlichiosis.
AN 2001:45457 AGRICOLA
DN IND23096995
TI **Detection** of platelet-bound **antibodies** in beagle dog after artificial infection with **Ehrlichia canis**.
AU Waner, T.; Leykin, I.; Shinitsky, M.; Sharabani, E.; Buch, H.; Keysary, A.; Bark, H.; Harrus, S.
AV DNAL (SF757.2.V38)
SO Veterinary immunology and immunopathology, Nov 23, 2000. Vol. 77, No. 1/2. p. 145-150
Publisher: Amsterdam : Elsevier.
CODEN: VIIMDS; ISSN: 0165-2427
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L22 ANSWER 12 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB **Ehrlichia canis**, E equi, and E risticii seroprevalence was determined by microimmunofluorescent **antibody** testing (IFA) in a sequential population of 1,845 sick dogs admitted during a 1-year period to the North Carolina State University Veterinary Teaching Hospital. A seroreactor was defined by a reciprocal IFA titer of gtoreq80 to E **canis**, E equi, or E risticii antigens. Of the 48 IFA seroreactors, 44 dogs were seroreactive to E **canis**, 21 to E equi, and 0 to E risticii. Seventeen dogs reacted to both E **canis** and E equi antigens. There was concordance of E **canis** IFA and western immunoblot (WI) test results for 36/44 dogs. Because of cross-reactivity of E **canis** sera with E equi antigens, WI was of less utility to confirm E equi exposure. After elimination of E **canis** seroreactors, there was concordance of 2/4 E equi IFA and WI

test results. Based upon a retrospective review of medical records, ehrlichiosis was diagnosed in 10/48 (21%) IFA seroreactive dogs, 9 of which were confirmed positive by WI. Of the remaining 38 IFA seroreactors, 29 also were confirmed by E **canis** or E equi WI. These results indicate that (1) ehrlichiosis was not diagnosed in the majority of serologically confirmed cases, (2) based upon E **canis** and E equi WI analysis, IFA testing was not specific (21 % false positive), (3) E **canis** sera cross-react with E equi antigens, and (4) serologic evidence of E risticii infection was lacking in the dog population studied.

AN 2000:115832 BIOSIS
DN PREV200000115832
TI Seroprevalence of **Ehrlichia canis, Ehrlichia** equi, and **Ehrlichia** risticii in sick dogs from North Carolina and Virginia.
AU Suksawat, Jiraporn; Hegarty, Barbara C.; Breitschwerdt, Edward B. (1)
CS (1) Department of Clinical Sciences, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough Street, Raleigh, NC, 27606 USA
SO Journal of Veterinary Internal Medicine, (Jan. Feb., 2000) Vol. 14, No. 1, pp. 50-55.
ISSN: 0891-6640.
DT Article
LA English
SL English

L22 ANSWER 13 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Background Human ehrlichiosis is a recently recognized tick-borne infection. Four species infect humans: **Ehrlichia** chaffeensis, E. sennetsu, E. **canis**, and the agent of human granulocytic ehrlichiosis. Methods We tested peripheral-blood leukocytes from 413 patients with possible ehrlichiosis by broad-range and species-specific polymerase-chain-reaction (PCR) assays for **ehrlichia**. The species present were identified by species-specific PCR assays and nucleotide sequencing of the gene encoding **ehrlichia** 16S ribosomal RNA. Western blot analysis was used to study serologic responses. Results In four patients, **ehrlichia** DNA was detected in leukocytes by a broad-range PCR assay, but not by assays specific for E. chaffeensis or the agent of human granulocytic ehrlichiosis. The nucleotide sequences of these PCR products matched that of E. ewingii, an agent previously reported as a cause of granulocytic ehrlichiosis in dogs. These four patients, all from Missouri, presented betweenMay and August 1996, 1997, or 1998 with fever, headache, and thrombocytopenia, with or without leukopenia. All had been exposed to ticks, and three were receiving immunosuppressive therapy. Serum samples obtained from three of these patients during convalescence contained **antibodies** that reacted with E. chaffeensis and E. **canis** antigens in a pattern different from that of humans with E. chaffeensis infection but similar to that of a dog experimentally infected with E. ewingii. Morulae were identified in neutrophils from two patients. All four patients were successfully treated with doxycycline. Conclusions These findings provide evidence of E. ewingii infection in humans. The associated disease may be clinically indistinguishable from infection caused by E. chaffeensis or the agent of human granulocytic ehrlichiosis.

AN 1999:434994 BIOSIS
DN PREV199900434994
TI **Ehrlichia** ewingii, a newly recognized agent of human ehrlichiosis.
AU Buller, Richard S.; Arens, Max; Hmiel, S. Paul; Paddock, Christopher D.; Sumner, John W.; Rikihisa, Yasuko; Unver, Ahmet; Gaudreault-Keener, Monique; Manian, Farrin A.; Liddell, Allison M.; Schmulewitz, Nathan; Storch, Gregory A. (1)
CS (1) Department of Pediatrics, Division of Infectious Diseases, St. Louis Children's Hospital, 1 Children's Pl., St. Louis, MO, 63110 USA

SO New England Journal of Medicine, (July 15, 1999) Vol. 341, No. 3, pp. 148-155.
ISSN: 0028-4793.
DT Article
LA English
SL English

L22 ANSWER 14 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB In 1991, the experimental infection of a goat with pooled blood from goats that were positive for anti-**Ehrlichia canis**, E. risticii, E. equi and E. phagocytophila **antibodies** was monitored (physical examination, cell blood count, microscopical examination of blood smears, serology) for 180 days. The infection produced a clinical condition characterized by intermittent fever, anaemia and leukopenia with neutropenia during the first 40 days. Recurrent leukocytosis with lymphocytosis was noticed afterwards. A permanent high-level thrombocytosis appeared after the 18th day. During the first week, cytoplasmic basophilic inclusion bodies were seen in smears of peripheral venous blood stained with May-Grunwald-Giemsa, first in mononuclear cells and then in neutrophils (in max 3% of circulating leukocytes). Seroconversion occurred during the 2nd week and the highest **antibody** titre (IFAT) was registered vs E. equi (10,240) at the 19th day, vs E. **canis** (320) at the 24th and vs E. risticii (80) at the 30th day. At the end of the observation period the infected goat was still positive for E. equi (titre 160) and E. **canis** (titre 10) only. The preinoculation serum of the infected goat was reactive with E. phagocytophila antigen (serum was tested for IF **antibodies** to E. phagocytophila at 1:200 dilution only, because of the limited quantities of antigen available), but the qualitative evaluation of fluorescence showed an increase from the 7th day, maximum intensity between the 14th and the 40th day and passed to negative from the 74th day. Although it was based on microscopy and serology only and not carried out in a SPF goat, the above experiment gave evidence of the existence of species of the E. phagocytophila genogroup in Italy for the first time.
AN 2001:66441 BIOSIS
DN PREV200100066441
TI Infection of small ruminants with **Ehrlichia** spp. in Sicily.
AU Pennisi, M. G. (1)
CS (1) Dipartimento di Medicina e Farmacologia Veterinaria, Via S. Cecilia 30, 98123, Messina: pennipet@unime.it Italy
SO Parassitologia (Rome), (September, 1999) Vol. 41, No. Suppl. 1, pp. 85-88. print.
ISSN: 0048-2951.
DT Article
LA English
SL English

L22 ANSWER 15 OF 36 VETU COPYRIGHT 2002 DERWENT INFORMATION LTD
AB Canine ehrlichiosis is rarely diagnosed in Poland as a consequence of a lack of diagnostic tests available to veterinarians who have little acquaintance with the problem. This review discusses current diagnostic procedures, which encompass hematological, microscopic and molecular genetic methods. The therapy of canine ehrlichiosis (infection with **Ehrlichia canis** and E. platys) requires prolonged antibiotic treatment, usually with tetracyclines of which doxycycline has proved the most effective. **Ehrlichia** occurs in the cytoplasm of leukocytes in the form of round, claret colored inclusion bodies with a mulberry shape. The role of ticks in transmission of ehrlichiosis is discussed.
AN 1999-60289 VETU
TI Diagnosis and treatment of ehrlichiosis in dogs. (Diagnostyka i leczenie erlichiozy pso)
AU Mizak B; Rzezutka A
CS Nat.Vet.Inst.Pulawy

LO Pulawy, Pol.
SO Med.Weter. (54, No. 12, 802-04, 1998) 1 Fig. 12 Ref.
CODEN: MDWTAG
AV ul. Sieroszewskiego 21/27, 24-100 Pulawy, Poland.
LA Polish
DT Journal
FA AB; LA; CT

L22 ANSWER 16 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:418261 BIOSIS
DN PREV199800418261
TI Evaluation of a new rapid dot-blot ELISA for the serological **detection** of **antibodies** to RMSF, E. **canis** and lyme in canines.
AU Paxton, H.; Haggerty, B.; Nolan, T.
CS Integrated Diagnostics Inc., Baltimore, MD USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (1998) Vol. 98, pp. 513-514.
Meeting Info.: 98th General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 17-21, 1998 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English

L22 ANSWER 17 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 4
AB Canine hepatozoonosis is a disease caused by the tick-borne protozoan Hepatozoon **canis**. Five puppies were inoculated by ingestion of Rhipicephalus sanguineus ticks experimentally infected with H. **canis**, and all became infected with H. **canis**: gametocytes were detected in blood smears from four dogs and schizonts were observed in the spleen and bone marrow of the fifth. **Antibodies** reactive with H. **canis** gametocytes were detected by the indirect fluorescent **antibody** test (IFA), with IgM detected initially in all dogs 16 to 39 days post infection (PI) and IgG 22 to 43 days PI. The presence of gametocytes was first observed within peripheral blood neutrophils in Giemsa-stained blood smears between days 28 and 43 PI. Gametocyte-reactive **antibodies** were detected before the appearance of blood gametocytes in three of the four parasitemic dogs and also in a dog with no observed parasitemia. The **detection** of serum **antibodies** prior to the **detection** of blood gametocytes, or without apparent parasitemia, suggests that **antibodies** reactive with gametocytes may be formed against earlier forms of the parasite developing in the parenchymal tissues. Sea of dogs experimentally infected with Babesia **canis**, Babesia gibsoni and **Ehrlichia canis** exhibited no reactivity when tested with H. **canis** antigen. Additionally, sera positive for H. **canis** were not reactive with antigens of Toxoplasma gondii, Neospora caninum, Leishmania donovani and E. **canis**. In conclusion, inoculation of dogs with ticks infected with H. **canis** results in production of **antibodies** reactive with peripheral blood gametocytes. **Detection** of IgG titres would be beneficial for the diagnosis of progressive infections with undetectable parasitemia, for seroprevalence studies, and as an adjunct to IgM titres in early infections.
AN 2000:18695 LIFESCI
TI **Antibody** response to Hepatozoon **canis** in experimentally infected dogs
AU Baneth, G.; Shkap, V.; Samish, M.; Pipano, E.; Savitsky, I.
CS School of Veterinary Medicine, Hebrew University of Jerusalem, P.O. Box 12, Rehovot 76100, Israel; E-mail: baneth@agri.huji.ac.il
SO Veterinary Parasitology [Vet. Parasitol.], (19980100) vol. 74, no. 2-4, pp. 299-305.
ISSN: 0304-4017.

DT Journal
FS K; Z
LA English
SL English

L22 ANSWER 18 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Two cats living in Gard (southern France) presented with lethargy, anorexia, weight loss, anemia, and gingivitis (one cat) were concurrently infected by Hepatozoon spp. and feline leukemia virus (FeLV). **Antibodies** against **Ehrlichia canis** were detected in serum of one cat. Hepatozoon spp. gametocytes found in neutrophils of these cats were morphologically different from Hepatozoon **canis** gametocytes, suggesting that the organisms might belong to different species. **Detection** of Hepatozoon spp. in cats should prompt the veterinarian to search for an underlying cause of immunodeficiency.
AN 1998:355163 BIOSIS
DN PREV199800355163
TI Hepatozoon spp. parasitemia and feline leukemia virus infection in two cats.
AU Beaufils, Jean-Pierre; Martin-Granel, Jean; Jumelle, Philippe
CS Clin. Vet., Route de Salinelles, 30250 Sommieres France
SO Feline Practice, (May-June, 1998) Vol. 26, No. 3, pp. 10-13. ISSN: 1057-6614.
DT Article
LA English

L22 ANSWER 19 OF 36 LIFESCI COPYRIGHT 2002 CSA
AB Human ehrlichiosis is a newly recognized rickettsial disease, first described in 1986 in the United States. The first European case of ehrlichiosis, diagnosed on a serological and clinical basis, was reported in Portugal in 1991. Furthermore, serological surveys recently conducted in Switzerland and the United Kingdom have shown the presence of **antibodies** to **Ehrlichia** phagocytophila in 5 to 7% of subjects bitten by ticks. Recently, a case of human granulocytic ehrlichiosis (HGE) infection was reported in Slovenia. The species involved in animal ehrlichiosis in Europe are E. **canis**, a monocytic **ehrlichia**, and granulocytic ehrlichiae of the E. phagocytophila genogroup. The vectors for ehrlichiae have been identified as Rhipicephalus sanguineus for E. **canis** and Ixodes ricinus for E. phagocytophila. Some work, based on PCR, on the **detection** of granulocytic ehrlichiae in Swedish ticks has been done, and indeed, a 16S rRNA gene sequence identical to that of the HGE agent has been found in one tick. However, on the whole, very little is known about the animal reservoir and the ecology of ehrlichiae throughout Europe. It has been supposed, on the basis of the coexistence of **antibodies** to tick-borne pathogens of ehrlichiosis and Lyme borreliosis (LB) in human sera, that the same ixodid ticks can be coinfected by Borrelia burgdorferi and **Ehrlichia**. Furthermore, the geographic distribution of HGE in the United States usually overlaps that of LB in those territories where the same ticks are present. In Italy **Ehrlichia** infections are present in dogs (E. **canis**) and horses, but neither human cases of clinically documented HGE nor any evidence of the organism in vector ticks has been reported. Since our investigations deal with the **detection** of B. burgdorferi in I. ricinus, in different areas of Italy, we looked for the presence of **Ehrlichia** in samples of ticks collected in an area of central Italy, where a certain prevalence of B. burgdorferi infection was detected.
AN 1998:35321 LIFESCI
TI Coexistence of **Ehrlichia** phagocytophila and Borrelia burgdorferi sensu lato in Ixodes ricinus ticks from Italy as determined by 16S rRNA gene sequencing
AU Anon.
SO J. CLIN. MICROBIOL., (19971200) vol. 35, no. 12, pp. 3365-3366.

ISSN: 0095-1137.
DT Journal
FS J; A
LA English

L22 ANSWER 20 OF 36 AGRICOLA DUPLICATE 5
AN 1999:55642 AGRICOLA
DN IND21996938
TI Comparison of nested PCR with immunofluorescent-**antibody** assay for **detection** of **Ehrlichia canis** infection in dogs treated with doxycycline.
AU Wen, B.; Rikihisa, Y.; Mott, J.M.; Greene, R.; Kim, H.Y.; Zhi, N.; Couto, G.C.; Unver, A.; Bartsch, R.
CS Ohio State University, Columbus.
AV DNAL (QR46.J6)
SO Journal of clinical microbiology, July 1997. Vol. 35, No. 7. p. 1852-1855
Publisher: Washington : American Society for Microbiology,
CODEN: JCMIDW; ISSN: 0095-1137
NTE Includes references
CY District of Columbia; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L22 ANSWER 21 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 6
AB In order to evaluate the relative sensitivity of the **detection** of **antibodies** against various antigenic proteins of **Ehrlichia** chaffeensis for the diagnosis of the emerging infectious disease human monocytotropic ehrlichiosis, Western immunoblotting was performed with 27 serum samples from convalescent patients with **antibodies**, as demonstrated by indirect immunofluorescence assay. Among 22 patients with **antibodies** reactive with the 120-kDa protein, 15 showed reactivity with the 29/28-kDa protein(s) and the proteins in the 44- to 88-kDa range. Two of the serum samples with this pattern reacted with the 29/28-kDa protein(s) of only the 91HE17 strain, and one sample reacted with only that of the Arkansas strain, indicating that the **antibodies** were stimulated by strain-specific epitopes. Overall, **antibodies** to the 29/28-kDa protein(s) were detected in only 16 patients' sera, suggesting that this protein is less sensitive than the 120-kDa protein. Two of 12 serum samples from healthy blood donors had **antibodies** reactive with the 120-kDa protein; one of these samples reacted also with the 29/28-kDa protein(s) of **Ehrlichia canis**, suggesting that unrecognized ehrlichial infection might have occurred, including human infection with E. **canis**. A high correlation between reactivity with the 120-kDa protein by Western immunoblotting and the recombinant 120-kDa protein by dot blot supports the potential usefulness of this recombinant antigen in diagnostic serology.
AN 1998:38151 LIFESCI
TI Western immunoblotting analysis of the **antibody** responses of patients with human monocytotropic ehrlichiosis to different strains of **Ehrlichia** chaffeensis and **Ehrlichia canis**
AU Chen, Sheng-Min; Cullman, L.C.; Walker, D.H.
CS Dep. Pathol., Univ. Texas Med. Branch, 301 University Blvd., Galveston, TX 77555-0609, USA
SO CLIN. DIAGN. LAB. IMMUNOL., (19971100) vol. 4, no. 6, pp. 731-735.
ISSN: 1071-412X.
DT Journal
FS J; F
LA English
SL English

L22 ANSWER 22 OF 36 VETU COPYRIGHT 2002 DERWENT INFORMATION LTD
AB The **detection** of thrombocytopathy and light-chain proteinuria

in a dog naturally infected with **Ehrlichia canis** is reported. A dog was presented with recurrent epistaxis unresponsive to topical adrenaline and p.o. prednisone or etamsylate. Examination revealed nonregenerative anemia, prolonged mucosal buccal bleeding time, monoclonal gammopathy and poor platelet aggregation responses to collagen, ristocetin and adrenaline. The dog was given a whole blood transfusion but severe epistaxis, serum hyperviscosity, a positive IFAT against E. **canis** and light-chain proteinuria were detected. Treatment with fluids and p.o. tetracycline, melphalan and prednisone lead to a full recovery.

AN 1997-63900 VETU
TI Thrombocytopathia and light-chain proteinuria in a dog naturally infected with **Ehrlichia canis**.
AU Varela F; Font X; Valladares J E; Alberola J
CS Univ.Barcelona-Auton.
LO Barcelona; Bellaterra, Esp.
SO J.Vet.Intern.Med. (11, No. 5, 309-11, 1997) 1 Fig. 1 Tab. 24 Ref.
AV Divisio de Farmacologia, Facultad de Veterinaria, Universitat Autonoma de Barcelona, 08193 Bellaterra, Spain. (J.A.).
LA English
DT Journal
FA AB; LA; CT

L22 ANSWER 23 OF 36 VETU COPYRIGHT 2002 DERWENT INFORMATION LTD
AB The clinical features and serology of 14 dogs with granulocytic ehrlichiosis are reported. The dogs presented with fever and depression and laboratory analysis revealed thrombocytopenia and lymphopenia. Treatment with doxycycline for 10 to 28 days lead to complete recovery in 12 cases while 2 were euthanized due to unrelated causes. The determination of E. **canis** titers using the IFAT was considered the most suitable diagnostic test.

AN 1997-61069 VETU
TI Clinical features and serology of 14 dogs affected by granulocytic ehrlichiosis in Sweden.
AU Egenvall A E; Hedhammar A A; Bjoersdorff A I
CS Univ.Swedish-Agr.Sci.
LO Uppsala, Swed.
SO Vet.Rec. (140, No. 9, 222-26, 1997) 1 Fig. 3 Tab. 55 Ref.
CODEN: VETRAX
AV Department of Medicine and Surgery, Swedish University of Agricultural Sciences, Box 7037, S-750 07 Uppsala, Sweden.
LA English
DT Journal
FA AB; LA; CT

L22 ANSWER 24 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 7
AB Six beagles were experimentally infected with **Ehrlichia canis**. All dogs developed typical clinical signs of ehrlichiosis and sero-converted. Ehrlichial antigenemia in the plasma of the infected dogs was detected using a sandwich enzyme-linked immunosorbent assay (ELISA). Ehrlichial antigen was present starting 15-20 days post-infection, after the development of clinical signs and **antibody** titre to **Ehrlichia canis**. The appearance of ehrlichial antigen in the plasma for a relatively short and variable period after the clinical and haematological signs, limits its potential as an early diagnostic prognosticator of canine ehrlichiosis (DBO).

AN 1998:9931 LIFESCI
TI **Detection** of ehrlichial antigen in plasma of beagle dogs with experimental acute **Ehrlichia canis** infection
AU Waner, T.; Rosner, M.; Harrus, S.; Naveh, A.; Zass, R.; Keysary, A.
CS Life Science Research Israel, P.O. Box 139, Ness Ziona, 70451, Israel
SO VET. PARASITOL., (19960600) vol. 63, no. 3-4, pp. 331-335.
ISSN: 0304-4017.

DT Journal
FS F; J
LA English
SL English

L22 ANSWER 25 OF 36 AGRICOLA DUPLICATE 8
AB The pattern of appearance of serum antiplatelet **antibodies** during the acute phase of experimental canine ehrlichiosis (**Ehrlichia canis**) was investigated in six beagles and correlated with the development of thrombocytopenia. The earliest **detection** of serum antiplatelet **antibodies** was made on Day 7 post-inoculation in one dog, on Day 13 in three out of six dogs, and on Day 17 post-inoculation in the remaining two dogs. Thrombocytopenia developed in all infected dogs. The results of this study suggest that antiplatelet **antibodies** play a role in the destruction of platelets in the acute phase of the disease. It is proposed that E. **canis** infection in dogs alters the immune system resulting in the overproduction of natural antiplatelet **antibodies**.
AN 1998:11850 AGRICOLA
DN IND20614880
TI Kinetics of serum antiplatelet **antibodies** in experimental acute canine ehrlichiosis.
AU Harrus, S.; Waner, T.; Weiss, D.J.; Keysary, A.; Bark, H.
CS Hebrew University of Jerusalem, Rehovot, Israel.
SO Veterinary immunology and immunopathology, May 1996. Vol. 51, No. 1/2. p. 13-20
Publisher: Amsterdam : Elsevier.
CODEN: VIIMDS; ISSN: 0165-2427
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L22 ANSWER 26 OF 36 AGRICOLA DUPLICATE 9
AB Ixodid ticks were collected from Connecticut, Massachusetts, Missouri, Pennsylvania, Rhode Island, and British Columbia (Canada) during 1991 to 1994 to determine the prevalence of infection with hemocytic (blood cell), rickettsia-like organisms. Hemolymph obtained from these ticks was analyzed by direct and indirect fluorescent **antibody** (FA) staining methods with dog, horse, or human sera containing **antibodies** to **Ehrlichia canis**, **Ehrlichia** equi, or Rickettsia rickettsii. Of the 693 nymphal and adult Amblyomma americanum, Dermacentor variabilis, Ixodes scapularis, and Ixodes pacificus ticks tested with dog anti-E. **canis** antiserum, 209 (32.5%) contained hemocytic bacteria. The prevalence of infected ticks varied greatly with species and locale. In parallel tests of duplicate hemolymph preparations from adult I. scapularis ticks, the hemocytic organisms reacted positively with E. **canis** and/or E. equi antisera, including sera from persons who had granulocytic ehrlichiosis. In separate PCR analyses, DNA of the agent of human granulocytic ehrlichiosis was detected in 59 (50.0%) of 118 adult and in 1 of 2 nymphal I. scapularis ticks tested from Connecticut. There was no evidence of **Ehrlichia** chaffeensis DNA in these ticks. In indirect FA tests of hemolymph for spotted fever group rickettsiae, the overall prevalence of infection was less than 4%. Specificity tests of antigens and antisera used in these studies revealed no cross-reactivity between E. **canis** and E. equi or between any of the ehrlichial reagents and those of R. rickettsii. The geographic distribution of hemocytic microorganisms with shared antigens to **Ehrlichia** species or spotted fever group rickettsiae is widespread.
AN 97:25605 AGRICOLA
DN IND20557794
TI Hemocytic rickettsia-like organisms in ticks: serologic reactivity with

antisera to ehrlichiae and **detection** of DNA of agent of human granulocytic ehrlichiosis by PCR.
AU Magnarelli, L.A.; Stafford, K.C. III; Mather, T.N.; Yeh, M.T.; Horn, K.D.; Dumler, J.S.
CS The Connecticut Agricultural Experiment Station, New Haven, CT.
AV DNAL (QR46.J6)
SO Journal of clinical microbiology, Oct 1995. Vol. 33, No. 10. p. 2710-2714 Publisher: Washington : American Society for Microbiology, CODEN: JCMIDW; ISSN: 0095-1137
NTE Includes references
CY District of Columbia; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L22 ANSWER 27 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB A seroepidemiological study of **Ehrlichia canis** was made in police dogs in Madrid (Spain). Anti-**Ehrlichia canis antibodies** were detected by indirect fluorescent **antibody** test for the **detection** of IgG. The results obtained (three positive dogs out of a population of 131 animals) represents a seroprevalence of canine ehrlichiosis of 2.29%. This seroprevalence is one of the lowest described for this type of population. The seroprevalence obtained from hunting dogs kennelled in Madrid in 1993 was 66.7% (24 positive out of a population of 36). Environmental conditions (temperature, humidity, rainfall, etc.) in both populations were very similar. We suggest that these conflicting results are due to the different prophylactic programmes used in these two populations.
AN 1995:394145 BIOSIS
DN PREV199598408445
TI Seroprevalence of **Ehrlichia canis** infections in police dogs in Spain.
AU Sainz, A. (1); Tesouro, M. A.; Rodriguez, F.; Mayoral, I.; Mazzucchelli, F.
CS (1) Dep. Patol. Anim. II, Fac. Vet., Univ. Complutense, 28040 Madrid Spain
SO Preventive Veterinary Medicine, (1995) Vol. 23, No. 3-4, pp. 179-182. ISSN: 0167-5877.
DT Article
LA English

L22 ANSWER 28 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The sensitivity and specificity of 2 **antibody** tests for diagnosis of idiopathic thrombocytopenic purpura (ITP) in dogs were investigated prospectively. An ELISA to detect **antibodies** bound to the surface of platelets from affected dogs (direct test) was performed in 34 dogs with a clinical diagnosis of ITP and in 21 dogs with thrombocytopenia attributable to other causes. An ELISA to detect platelet-bindable **antibodies** in serum from affected dogs (indirect test) was performed in 32 dogs with ITP and in 15 dogs with other causes of thrombocytopenia. The direct test was positive in 32 of 34 dogs with ITP (sensitivity, 94%) and negative in 13 of 21 dogs with other causes of thrombocytopenia (specificity, 62%). Positive direct test results were obtained in 2 dogs with systemic lupus erythematosus, and in 1 dog each with concurrent **Ehrlichia canis** and Babesia **canis** infections, dirofilariasis, myelodysplasia, disseminated intravascular coagulation (of unknown cause), and thrombocytopenia subsequent to administration of trimethoprim/sulfadiazine, as well as in 1 dog with thrombocytopenia 14 days after a whole blood transfusion. The indirect test had positive results in 11 of 32 dogs with ITP (sensitivity, 34%) and negative results in 12 of 15 dogs with other causes of thrombocytopenia (specificity, 80%). Positive indirect test results were obtained in 1 dog each with systemic lupus erythematosus, concurrent E. **canis** and B. **canis** infections, and thrombocytopenia subsequent to administration of trimethoprim/sulfadiazine.

Detection of platelet-bound **antibodies** was more sensitive than **detection** of serum-platelet bindable **antibodies** in confirming a diagnosis of ITP in dogs. Neither test was specific for ITP. Therefore, a negative test result for platelet-bound **antibodies** in dogs with thrombocytopenia is helpful in excluding ITP as a cause of thrombocytopenia; however, a positive test result is not specific for ITP, and other causes of immune-mediated thrombocytopenia must be excluded to establish a diagnosis of ITP.

AN 1995:78876 BIOSIS
DN PREV199598093176
TI **Detection** of platelet-bound and serum platelet-bindable **antibodies** for diagnosis of idiopathic thrombocytopenic purpura in dogs.
AU Lewis, David C. (1); Meyers, Kenneth M.; Callan, M. Beth; Buecheler, Jorg; Giger, Urs
CS (1) Dep. Clinical Sci., College Veterinary Med., Kansas State Univ., Manhattan, KS 66506-5606 USA
SO Journal of the American Veterinary Medical Association, (1995) Vol. 206, No. 1, pp. 47-52.
ISSN: 0003-1488.
DT Article
LA English

L22 ANSWER 29 OF 36 AGRICOLA
AB The purpose of the study was to compare the sensitivity of PCR with those of cell culture reisolation of **Ehrlichia canis**, the indirect fluorescent **antibody** test (IFA), and Western immunoblotting (WI) in the early diagnosis of canine ehrlichiosis. Five German shepherd dogs were intravenously inoculated with 10(7) E. **canis**-infected DH82 cells. Blood was collected on alternate days during a 2-week postinoculation period. Mononuclear cell fractions were harvested and used for E. **canis** reisolation and DNA extraction for PCR. The plasma was used for assaying **antibodies** against E. **canis**. By PCR, the 16S rRNA gene of E. **canis** was detected in the mononuclear cell specimens collected as early as day 4 to 10 postexposure (PE). E. **canis** was reisolated from the blood starting on day 2 PE from all five dogs. The indirect fluorescent **antibody** test and Western immunoblotting could detect E. **canis antibodies** as early as 2 to 8 days PE. Cell culture reisolation proved to be the most sensitive and definitive for early diagnosis of ehrlichiosis, but it is not very convenient, since it takes a long time (14 to 34 days) to show up positive. The sensitivity of PCR is comparable to or slightly less than that of other established methods; however, the convenience, quickness, and direct nature of detecting E. **canis** DNA is expected to make PCR more useful for clinical diagnosis.
AN 94:73313 AGRICOLA
DN IND20421211
TI Comparison of PCR with other tests for early diagnosis of canin ehrlichiosis.
AU Iqbal, Z.; Chaichanasiriwithaya, W.; Rikihisa, Y.
AV DNAL (QR46.J6)
SO Journal of clinical microbiology, July 1994. Vol. 32, No. 7. p. 1658-1662
Publisher: Washington : American Society for Microbiology,
CODEN: JCMIDW; ISSN: 0095-1137
NTE Includes references
CY District of Columbia; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L22 ANSWER 30 OF 36 AGRICOLA
AN 94:87460 AGRICOLA
DN IND20432694

TI Comparison of the dot-blot enzyme linked immunoassay with immunofluorescence for detecting **antibodies** to **Ehrlichia canis**.
AU Cadman, H.F.; Kelly, P.J.; Matthewman, L.A.; Zhou, R.; Mason, P.R.
CS University of Zimbabwe, Mount Pleasant, Zimbabwe
AV DNAL (41.8 V641)
SO The Veterinary record : journal of the British Veterinary Association, Oct 8, 1994. Vol. 135, No. 15. p. 362
Publisher: London : The British Veterinary Association.
CODEN: VETRAX; ISSN: 0042-4900
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. Imprint other than FAO
LA English

L22 ANSWER 31 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1994:227306 BIOSIS
DN PREV199497240306
TI **Detection** of **Ehrlichia canis** **antibodies** by indirect fluorescent **antibody** test.
AU Tresamol, P. V. (1); Dhinakaran, Manorama; Suresh, S.
CS (1) Palathingal House, P.O. Thazhekkad, Kerala 680 697 India
SO Indian Journal of Animal Sciences, (1994) Vol. 64, No. 3, pp. 259-260.
ISSN: 0367-8318.
DT Article
LA English

L22 ANSWER 32 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 10
AB A mouse monoclonal **antibody** (MAb 1A9) was produced and used in **detection** of **Ehrlichia** chaffeensis in human tissues including kidney, liver, and lung by using an indirect immunohistologic stain. MAb 1A9 was specific to E. chaffeensis and did not react with other bacteria, including **Ehrlichia canis**, which is the organism most closely related to E. chaffeensis. It reacted with an epitope present in two surface proteins of E. chaffeensis with molecular masses of 29 and 27 kDa. E. chaffeensis was easily detected in human tissue by immunohistology with MAb 1A9. This study demonstrates that our MAb can provide a specific and simple method for **detection** of E. chaffeensis in clinical specimens for establishing an etiologic diagnosis of human ehrlichiosis; it may also provide a tool for the investigation of immunopathologic characteristics in infected patients.
AN 94:29491 LIFESCI
TI **Detection** of **Ehrlichia** chaffeensis in human tissue by using a species-specific monoclonal **antibody**
AU Yu, Xuejie; Brouqui, P.; Dumler, J.S.; Raoult, D.*
CS Unite Rickettsies, Fac. Med., 27 Blvd. Jean Moulin, 13385 Marseille, France
SO J. CLIN. MICROBIOL., (1993) vol. 31, no. 12, pp. 3284-3288.
ISSN: 0095-1137.
DT Journal
FS J; F; W3
LA English
SL English

L22 ANSWER 33 OF 36 VETU COPYRIGHT 2002 DERWENT INFORMATION LTD
AB The **detection** of Lyme disease in dogs using the IFAT is described. From 1984-1986, 1073 symptomatic dogs and 274 horses in the USA were tested. Infection rates rose from 63%-72% with titers of 64-4086 being considered positive. 27/231 Dogs studied by IFAT showed high **antibody** levels to both lyme and Rocky Mountain Spotted Fever, suggesting co-infection. 10/36 Separate dogs with **Ehrlichia canis** infection also showed **antibody** to Lyme disease spirochetes. Subsequent studies showed a good correlation between an

ELISA and IFAT and a Western blot analysis. Further studies are investigating IgM and IgG changes over the course of the disease to differentiate among primary or reactivated infection and reinfection.

AN 1989-62024 VETU M

TI **Detection** of Lyme Disease in Dogs by Indirect Immunofluorescent **Antibody** Assays.

AU Gilfillan R; Kane D; O Brien M E; Rouvet D; Dasbach J

LO Boston; Nantucket, Mass., USA

SO Ann.N.Y.Acad.Sci. (539, 458-59, 1988) 6 Ref.
CODEN: ANYAA9

AV Department of Pathology, Tufts Veterinary Diagnostic Laboratories, Tufts University School of Veterinary Medicine, Boston, Massachusetts 02130, U.S.A.

LA English

DT Journal

FA LA; CT; MPC

L22 ANSWER 34 OF 36 LIFESCI COPYRIGHT 2002 CSA DUPLICATE 11

AB E. sennetsu , the causative agent of human sennetsu rickettsiosis, was successfully propagated in primary canine blood monocyte cultures. The growth cycle of this organism appears to be similar to that of E. **canis** . The antigen derived from E. sennetsu cultures was used to develop an indirect fluorescent **antibody** test for **detection** and titration of serum **antibodies** to the organism. Using this test system, the authors found that five human serum samples obtained from patients clinically diagnosed as having sennetsu rickettsiosis were positive for anti-E. sennetsu **antibodies**. In addition, 29% of the serum samples obtained from 200 patients having a fever of unknown origin and residing in various regions of Malaysia were also serologically positive. All sera from apparently healthy individuals were negative in the test. The possibility of a higher prevelence of human sennetsu rickettsiosis in Southeast Asia and the potential usefulness of the canine model for studies of human sennetsu rickettsiosis are discussed.

AN 85:6783 LIFESCI

TI Adaptation of **Ehrlichia** sennetsu to canine blood monocytes: Preliminary structural and serological studies with cell culture-derived **Ehrlichia** sennetsu .

AU Holland, C.J.; Ristic, M.; Huxsoll, D.L.; Cole, A.I.; Rapmund, G.

CS Dep. Vet. Pathobiol., Coll. Vet. Med., Univ. Illinois, Urbana, IL 61801, USA

SO INFECT. IMMUN., (1985) vol. 48, no. 2, pp. 366-371.

DT Journal

FS J; F

LA English

SL English

L22 ANSWER 35 OF 36 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 12

AN 1984:72884 BIOSIS

DN BR26:72884

TI SEROLOGIC DIAGNOSIS OF INFECTIOUS CYCLIC THROMBOCYTOPENIA IN DOGS USING AN INDIRECT FLUORESCENT **ANTIBODY** TEST.

AU FRENCH T W; HARVEY J W

CS DEP. PATHOL., N.Y. STATE COLL. VET. MED., CORNELL UNIV., ITHACA, NY 14853.

SO Am. J. Vet. Res., (1983) 44 (12), 2407-2411.
CODEN: AJVRAH. ISSN: 0002-9645.

FS BR; OLD

LA English

L22 ANSWER 36 OF 36 CONFSCI COPYRIGHT 2002 CSA

AN 2000:1707 CONFSCI

DN 00-001707

TI **Detection** of **antibody** to **Ehrlichia**

canis in dogs by indirect fluorescent **antibody** test (IFA) in Japan

AU Yamamoto, S.; Ishida, Y.; Jinbo, T.; Inokuma, H.; Tanahara, N.; Kiyuna, T.; Oshshiro, S.; Kikumine, M.; Rikihisa, Y.

CS Lab. Immunology, Fac. Environmental and Health Sci., Azabu Univ., Sagamihara, Kanagawa 229-8501, Japan

SO Society for Applied Microbiology (SFAM), ; phone: 44 0 1234 326661; fax: 44 0 1234 326678; email: info@sfam.org.uk, Abstracts available. Contact SFAM for price. Poster Paper No. P25.
Meeting Info.: 993 5018: Escherichia Coli: Friend and Foe (9935018). York (UK). 13-16 Jul 1999. Society for Applied Microbiology.

DT Conference

FS DCCP

LA English

=>

L25 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:208502 CAPLUS
DOCUMENT NUMBER: 134:219342
TITLE: Membrane **immunoassays** for detection of multiple tick-borne diseases
INVENTOR(S): Levin, Andrew E.
PATENT ASSIGNEE(S): Immunetics, Inc., USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001020325	A1	20010322	WO 1999-US21814	19990920
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9960540	A1	20010417	AU 1999-60540	19990920

PRIORITY APPLN. INFO.: US 1999-398162 A 19990916
WO 1999-US21814 W 19990920
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 27 USPATFULL
ACCESSION NUMBER: 2001:147456 USPATFULL
TITLE: Cell lines infected with granulocytic ehrlichia, vaccines, diagnostics and methods
INVENTOR(S): Coughlin, Richard T., Leicester, MA, United States
Gingrich-Baker, Cindy, Boylston, MA, United States
PATENT ASSIGNEE(S): Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6284238	B1	20010904
APPLICATION INFO.:	US 1995-470358		19950606 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Swartz, Rodney P.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 902
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 3 OF 27 USPATFULL
ACCESSION NUMBER: 2001:51790 USPATFULL
TITLE: Method for detecting anti-squalene antibodies
INVENTOR(S): Asa, Pamela B., Memphis, TN, United States
Garry, Robert F., New Orleans, LA, United States
PATENT ASSIGNEE(S): The Administrators of the Tulane Educational Fund, New Orleans, LA, United States (U.S. corporation)

	NUMBER	KIND	DATE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6214566	B1	20010410
APPLICATION INFO.:	US 1998-193115		19981116 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Park , Hankyel T.
LEGAL REPRESENTATIVE: Howrey Simon Arnold & White, LLP
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
LINE COUNT: 785
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 4 OF 27 USPATFULL
ACCESSION NUMBER: 2001:51779 USPATFULL
TITLE: Method compositions and kit for detection
INVENTOR(S): Leushner, James, North York, Canada
Hui, May, Toronto, Canada
Dunn, James M., Scarborough, Canada
LaCroix, Jean-Michel, Etobicoke, Canada
PATENT ASSIGNEE(S): Visible Genetics Inc., Toronto, Canada (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6214555	B1	20010410
APPLICATION INFO.:	US 1999-311260		19990513 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-9483, filed on 20 Jan 1998 Continuation-in-part of Ser. No. US 1996-640672, filed on 1 May 1996, now patented, Pat. No. US 5789168 Continuation-in-part of Ser. No. US 1996-684498, filed on 19 Jul 1996, now patented, Pat. No. US 5830657 Continuation-in-part of Ser. No. US 1997-807138, filed on 22 Feb 1997, now patented, Pat. No. US 5888736
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Campbell, Eggerton A.
LEGAL REPRESENTATIVE: Oppedahl & Larson LLP
NUMBER OF CLAIMS: 12
EXEMPLARY CLAIM: 1
LINE COUNT: 903
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 5 OF 27 LIFESCI COPYRIGHT 2002 CSA
ACCESSION NUMBER: 2002:13318 LIFESCI
TITLE: Western Blot Analysis of Sera Reactive to Human Monocytic Ehrlichiosis and Human Granulocytic Ehrlichiosis Agents
AUTHOR: Unver, A.; Felek, S.; Paddock, C.D.; Zhi, N.; Horowitz, H.W.; Wormser, G.P.; Cullman, L.C.; Rikihisa, Y.*
CORPORATE SOURCE: Department of Veterinary Biosciences, College of Veterinary Medicine, The Ohio State University, 1925 Coffey Rd., Columbus, OH 43210-1093.; E-mail: rikihisa.1@osu.edu
SOURCE: Journal of Clinical Microbiology [J. Clin. Microbiol.], (20011100) vol. 39, no. 11, pp. 3982-3986.
ISSN: 0095-1137.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L25 ANSWER 6 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER: 2001:496748 BIOSIS
DOCUMENT NUMBER: PREV200100496748

TITLE: Serologic and molecular evidence of coinfection with multiple vector-borne pathogens in dogs from Thailand.
AUTHOR(S): Suksawat, Jiraporn; Xuejie, Yu; Hancock, Susan I.; Hegarty, Barbara C.; Nilkumhang, Parnchitt; Breitschwerdt, Edward B. (1)
CORPORATE SOURCE: (1) Department of Clinical Sciences, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough Street, Raleigh, NC, 27606: ed_breitschwerdt@ncsu.edu USA
SOURCE: Journal of Veterinary Internal Medicine, (September October, 2001) Vol. 15, No. 5, pp. 453-462. print. ISSN: 0891-6640.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L25 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:172475 CAPLUS
DOCUMENT NUMBER: 135:177562
TITLE: Analyte-specific reagents and flow cytometry, part 2: patient with pancytopenia and flu-like illness
AUTHOR(S): Caldwell, Charles W.
CORPORATE SOURCE: Pathol. and Anatomical Sci., Univ. Missouri, Columbus, MO, 65203, USA
SOURCE: American Clinical Laboratory (2001), 20(1), 10-11 CODEN: ACLAE7; ISSN: 1041-3235
PUBLISHER: International Scientific Communications, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

L25 ANSWER 8 OF 27 USPATFULL
ACCESSION NUMBER: 2000:7192 USPATFULL
TITLE: Immunodominant 120 kDa surface-exposed adhesion protein genes of **Ehrlichia chaffeensis**
INVENTOR(S): Walker, David H., Galveston, TX, United States
Yu, Xue-Jie, Galveston, TX, United States
PATENT ASSIGNEE(S): Research Development Foundation, Carson, NV, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6015691		20000118
APPLICATION INFO.:	US 1996-656034		19960531 (8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Hutzell, Paula K.
ASSISTANT EXAMINER: Masood, Khalzd
LEGAL REPRESENTATIVE: Arnold White & Durkee
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1890
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:287399 CAPLUS
DOCUMENT NUMBER: 133:307270
TITLE: Primary isolation of **Ehrlichia chaffeensis** from patients with febrile illnesses: Clinical and molecular characteristics
AUTHOR(S): Standaert, Steven M.; Yu, Tina; Scott, Margie A.; Childs, James E.; Paddock, Christopher D.; Nicholson, William L.; Singleton, Joseph, Jr.; Blaser, Martin J.
CORPORATE SOURCE: Division of Infectious Diseases, Vanderbilt University

School of Medicine, Nashville, TN, 37232-2637, USA
SOURCE: J. Infect. Dis. (2000), 181(3), 1082-1088
CODEN: JIDIAQ; ISSN: 0022-1899
PUBLISHER: University of Chicago Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 10 OF 27 LIFESCI COPYRIGHT 2002 CSA
ACCESSION NUMBER: 2001:33299 LIFESCI
TITLE: Detection of antibodies reactive with **Ehrlichia chaffeensis** in the raccoon
AUTHOR: Comer, J.A.; Nicholson, W.L.; Paddock, C.D.; Sumner, J.W.; Childs, J.E.
CORPORATE SOURCE: Viral and Rickettsial Zoonoses Branch, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia 30333, USA; E-mail: jnc0@cdc.gov
SOURCE: Journal of Wildlife Diseases [J. Wildl. Dis.], (20001000) vol. 36, no. 4, pp. 705-712.
ISSN: 0090-3558.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L25 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:537108 CAPLUS
DOCUMENT NUMBER: 134:112525
TITLE: Comparison of two recombinant major outer membrane proteins of the human granulocytic ehrlichiosis agent for use in an enzyme-linked immunosorbent assay
AUTHOR(S): Tajima, Tomoko; Zhi, Ning; Lin, Quan; Rikihisa, Yasuko; Horowitz, Harold W.; Ralfalli, John; Wormser, Gary P.; Hechemy, Karim E.
CORPORATE SOURCE: Department of Veterinary Biosciences, College of Veterinary Medicine, The Ohio State University, Columbus, OH, 43210-1093, USA
SOURCE: Clinical and Diagnostic Laboratory Immunology (2000), 7(4), 652-657
CODEN: CDIMEN; ISSN: 1071-412X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 12 OF 27 CABA COPYRIGHT 2002 CABI
ACCESSION NUMBER: 2000:103017 CABA
DOCUMENT NUMBER: 20000507246
TITLE: Q fever endocarditis associated with extensive serological cross-reactivity
AUTHOR: Graham, J. V.; Baden, L.; Tsiodras, S.; Karchmer, A. W.
CORPORATE SOURCE: Division of Infectious Diseases and Geographic Medicine, Stanford University Medical Center, Room S156, 300 Pasteur Dr., Stanford, CA 94305-5107, USA.
SOURCE: Clinical Infectious Diseases, (2000) Vol. 30, No. 3, pp. 609-610. 11 ref.
ISSN: 1058-4838
DOCUMENT TYPE: Journal
LANGUAGE: English

L25 ANSWER 13 OF 27 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000029848 EMBASE
TITLE: Natural infection of domestic goats with **Ehrlichia chaffeensis**.
AUTHOR: Dugan V.G.; Little S.E.; Stallknecht D.E.; Beall A.D.
CORPORATE SOURCE: S.E. Little, Dept. of Med. Microbiol./Parasitol., College of Veterinary Medicine, University of Georgia, Athens, GA 30602, United States. slittle@calc.vet.uga.edu
SOURCE: Journal of Clinical Microbiology, (2000) 38/1 (448-449). Refs: 15
ISSN: 0095-1137 CODEN: JCMIDW
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L25 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:672518 CAPLUS
DOCUMENT NUMBER: 131:307683
TITLE: Nucleic acids encoding outer membrane protein of human granulocytic ehrlichiosis agent
INVENTOR(S): Rikhisa, Yasuko; Zhi, Ning; Ohashi, Norio
PATENT ASSIGNEE(S): The Ohio State Research Foundation, USA
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952370	A1	19991021	WO 1999-US7759	19990408
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9934835	A1	19991101	AU 1999-34835	19990408
EP 1069827	A1	20010124	EP 1999-916535	19990408
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1998-81192P P 19980409
US 1999-128087P P 19990407
WO 1999-US7759 W 19990408
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:219938 CAPLUS
DOCUMENT NUMBER: 130:249405
TITLE: Outer membrane proteins of Ehrlichia canis and **Ehrlichia chaffeensis** and the genes encoding them and the diagnosis of Ehrlichiosis
INVENTOR(S): Rikihisa, Yasuko; Ohashi, Noris
PATENT ASSIGNEE(S): The Ohio State University, USA
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9913720	A1	19990325	WO 1998-US19600	19980918

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9895719	A1	19990405	AU 1998-95719	19980918
EP 1026949	A1	20000816	EP 1998-949384	19980918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRIORITY APPLN. INFO.: US 1997-59353P P 19970919
WO 1998-US19600 W 19980918

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 16 OF 27 USPATFULL

ACCESSION NUMBER: 1999:137009 USPATFULL
TITLE: Cell lines infected with granulocytic ehrlichia, vaccines, diagnostics and methods
INVENTOR(S): Coughlin, Richard T., Leicester, MA, United States
Gingrich-Baker, Cindy, Boylston, MA, United States
PATENT ASSIGNEE(S): Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5976860		19991102
APPLICATION INFO.:	US 1996-613415		19960311 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-470358, filed on 6 Jun 1995
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Housel, James C.
ASSISTANT EXAMINER: Swartz, Rodney P.
LEGAL REPRESENTATIVE: Hale and Dorr LLP
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1235
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 17 OF 27 USPATFULL

ACCESSION NUMBER: 1999:40159 USPATFULL
TITLE: Method, compositions and kit for detection and identification of microorganisms
INVENTOR(S): Lacroix, Jean-Michel, Etobicoke, Canada
Leushner, James, North York, Canada
Hui, May, Toronto, Canada
Dunn, James M., Scarborough, Canada
Larson, Marina T., Yorktown, NY, United States
PATENT ASSIGNEE(S): Visible Genetics, Inc., Toronto, Canada (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5888736		19990330
APPLICATION INFO.:	US 1997-807138		19970227 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1996-684498, filed on 19 Jul 1996, now patented, Pat. No. US 5830657 Ser. No. Ser. No. US 1996-640672, filed on 1 May 1996, now patented, Pat. No. US 5789168 And Ser. No. US 1995-577858, filed on 22 Dec 1995, now patented, Pat. No. US 5834189
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Elliott, George C.
ASSISTANT EXAMINER: Larson, Thomas G

LEGAL REPRESENTATIVE: Oppedahl & Larson LLP
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 2556
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L25 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:203306 CAPLUS
DOCUMENT NUMBER: 131:43303
TITLE: Potential value of major antigenic protein 2 for serological diagnosis of heartwater and related ehrlichial infections
AUTHOR(S): Bowie, Michael V.; Reddy, G. Roman; Semu, Shalt M.; Mahan, Suman M.; Barbet, Anthony F.
CORPORATE SOURCE: Department of Pathobiology, College of Veterinary Medicine, University of Florida, Gainesville, FL, 32610, USA
SOURCE: Clin. Diagn. Lab. Immunol. (1999), 6(2), 209-215
CODEN: CDIMEN; ISSN: 1071-412X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 19 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
ACCESSION NUMBER: 1999:379778 BIOSIS
DOCUMENT NUMBER: PREV199900379778
TITLE: Characterization of monoclonal antibodies to an immunodominant protein of the etiologic agent of human granulocytic ehrlichiosis.
AUTHOR(S): Ravyn, M. Dana (1); Lamb, Lana J. (1); Jemmerson, Ronald (1); Goodman, Jesse L. (1); Johnson, Russell C. (1)
CORPORATE SOURCE: (1) Department of Microbiology and Division of Infectious Diseases, Department of Medicine, University of Minnesota Academic Health Center, Minneapolis, MN USA
SOURCE: American Journal of Tropical Medicine and Hygiene, (July, 1999) Vol. 61, No. 1, pp. 171-176.
ISSN: 0002-9637.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L25 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:672667 CAPLUS
DOCUMENT NUMBER: 129:271563
TITLE: Diagnosis of human granulocytic ehrlichiosis based on the gene for a heat-shock protein HSP60 homolog expressed by Ehrlichia
INVENTOR(S): Persing, David H.; Kolbert, Christopher P.; Bruinsma, Elizabeth S.
PATENT ASSIGNEE(S): Mayo foundation for Medical Education and Research, USA
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9842846	A1	19981001	WO 1998-US5159	19980317

W: NO
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
EP 979285 A1 20000216 EP 1998-911702 19980317
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
PRIORITY APPLN. INFO.: US 1997-828199 19970321
WO 1998-US5159 19980317

L25 ANSWER 21 OF 27 USPATFULL
ACCESSION NUMBER: 1998:91807 USPATFULL
TITLE: Identification of a new Ehrlichia species from a patient suffering from Ehrlichiosis
INVENTOR(S): Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PATENT ASSIGNEE(S): The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5789176		19980804
APPLICATION INFO.:	US 1997-943464		19971003 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1995-394464, filed on 27 Feb 1995, now abandoned which is a division of Ser. No. US 1993-147891, filed on 5 Nov 1993, now patented, Pat. No. US 5413931 which is a continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Elliott, George C.
ASSISTANT EXAMINER: Schwartzman, Robert A.
LEGAL REPRESENTATIVE: Fitch, Even, Tabin & Flannery
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 493

L25 ANSWER 22 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
ACCESSION NUMBER: 1998:305059 BIOSIS
DOCUMENT NUMBER: PREV199800305059
TITLE: Cloning and expression of the 44-kilodalton major outer membrane protein gene of the human granulocytic ehrlichiosis agent and application of the recombinant protein to serodiagnosis.
AUTHOR(S): Zhi, N.; Ohashi, N.; Rikihisa, Y. (1); Horowitz, H. W.; Wormser, G. P.; Hechemy, K.
CORPORATE SOURCE: (1) Dep. Vet. Biosci., Coll. Vet. Med., Ohio State Univ., 1925 Coffey Rd., Columbus, OH 43210-1093 USA
SOURCE: Journal of Clinical Microbiology, (June, 1998) Vol. 36, No. 6, pp. 1666-1673.
ISSN: 0095-1137.
DOCUMENT TYPE: Article
LANGUAGE: English

L25 ANSWER 23 OF 27 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
ACCESSION NUMBER: 1998:305056 BIOSIS
DOCUMENT NUMBER: PREV199800305056
TITLE: Immunodiagnosis of human granulocytic ehrlichiosis by using culture-derived human isolates.
AUTHOR(S): Ravyn, M. Dana; Goodman, Jesse L.; Kodner, Carrie B.; Westad, Deborah K.; Coleman, Lisa A.; Engstrom, Suzanne M.; Nelson, Curt M.; Johnson, Russell C. (1)

CORPORATE SOURCE: (1) Univ. Minnesota, Academic Health Cent., 420 Delaware St. S.E., Box 196 UMHC, Minneapolis, MN 55455-0312 USA
SOURCE: Journal of Clinical Microbiology, (June, 1998) Vol. 36, No. 6, pp. 1480-1488.
ISSN: 0095-1137.
DOCUMENT TYPE: Article
LANGUAGE: English

L25 ANSWER 24 OF 27 LIFESCI COPYRIGHT 2002 CSA
ACCESSION NUMBER: 97:9776 LIFESCI
TITLE: The recombinant 120-kilodalton protein of **Ehrlichia chaffeensis**, a potential diagnostic tool
AUTHOR: Yu, Xue-Jie; Crocquet-Valdes, P.; Cullman, L.C.; Walker, D.H.*
CORPORATE SOURCE: Dep. Pathol., Univ. Texas Med. Branch, 301 Univ. Blvd., Galveston, TX 77555-0609, USA
SOURCE: J. CLIN. MICROBIOL., (1996) vol. 34, no. 11, pp. 2853-2855.
ISSN: 0095-1137.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L25 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:104044 CAPLUS
DOCUMENT NUMBER: 126:184769
TITLE: Recombinant expression and use in serology of a specific fragment from the Cowdria ruminantium MAP1 protein
AUTHOR(S): Van Vliet, Arnoud H. M.; Van Der Zeijst, Bernard A. M.; Camus, Emmanuel; Mahan, Suman M.; Martinez, Dominique; Jongejan, Frans
CORPORATE SOURCE: Institute of Infectious Diseases and Immunology, Department of Bacteriology, Faculty of Veterinary Medicine, Utrecht University, Utrecht, 3508 TD, Neth.
SOURCE: Ann. N. Y. Acad. Sci. (1996), 791(Vector-Borne Pathogens), 35-45
CODEN: ANYAA9; ISSN: 0077-8923
PUBLISHER: New York Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L25 ANSWER 26 OF 27 USPATFULL
ACCESSION NUMBER: 95:40869 USPATFULL
TITLE: Ehrlichia species from a patient suffering from ehrlichiosis
INVENTOR(S): Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PATENT ASSIGNEE(S): United States of America, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5413931		19950509
APPLICATION INFO.:	US 1993-147891		19931105 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: Ware, Deborah K.
LEGAL REPRESENTATIVE: Needle & Rosenberg
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 376

L25 ANSWER 27 OF 27 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 95203025 EMBASE
DOCUMENT NUMBER: 1995203025
TITLE: Seroepidemiological survey of rickettsial infections among blood donors in central Tunisia.
AUTHOR: Letaief A.O.; Yacoub S.; Dupont H.T.; Le Cam C.; Ghachem L.; Jemni L.; Raoult D.
CORPORATE SOURCE: Unite des Rickettsies, CNRS EP J0054, Faculte de Medecine, 27 Boulevard Moulin,13385 Marseille, France
SOURCE: Transactions of the Royal Society of Tropical Medicine and Hygiene, (1995) 89/3 (266-268).
ISSN: 0035-9203 CODEN: TRSTAZ
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
LANGUAGE: English
SUMMARY LANGUAGE: English

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	107.68	144.47

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-2.48

FILE 'STNGUIDE' ENTERED AT 13:21:38 ON 28 MAR 2002

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Mar 22, 2002 (20020322/UP).

=>

22 ANSWER 1 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:816394 CAPLUS
DOCUMENT NUMBER: 135:356748
TITLE: P43 antigen for the immunodiagnosis of canine ehrlichiosis and uses thereof
INVENTOR(S): Walker, David H.; McBride, Jere W.
PATENT ASSIGNEE(S): Research Development Foundation, USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001082862	A2	20011108	WO 2001-US13446	20010427
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6355777	B1	20020312	US 2000-561322	20000428

PRIORITY APPLN. INFO.: US 2000-561322 A 20000428

L22 ANSWER 2 OF 21 USPATFULL
ACCESSION NUMBER: 2001:184841 USPATFULL
TITLE: Nucleic acids, proteins, and methods of use of granulocytic ehrlichia
INVENTOR(S): Murphy, Cheryl, Hopkinton, MA, United States
Storey, James, Linwood, MA, United States
Beltz, Gerald A., Lexington, MA, United States
Coughlin, Richard T., Leicester, MA, United States
PATENT ASSIGNEE(S): Aquila Biopharmaceuticals Inc., Framingham, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6306394	B1	20011023
APPLICATION INFO.:	US 1998-66047		19980424 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-44869P	19970425 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Swart, Rodney P.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 67 Drawing Figure(s); 63 Drawing Page(s)
LINE COUNT: 2116
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 3 OF 21 USPATFULL
ACCESSION NUMBER: 2001:121260 USPATFULL
TITLE: Polymerase chain reaction diagnostic assays for the detection of dirofilaria immitis in blood and mosquitoes
INVENTOR(S): Lizotte-Waniewski, Michelle, 64 Hawley St., #1,

Northampton, MA, United States 01060
Williams, Steven A., 65 Depot Rd., North Hatfield, MA, United States 01066

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6268153	B1	20010731	
	WO 9932504		19990701	
APPLICATION INFO.:	US 2000-581493		20000614	(9)
	WO 1998-US27063		19981218	
			20000614	PCT 371 date
			20000614	PCT 102(e) date

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Jones, W. Gary
ASSISTANT EXAMINER: Taylor, Janell E.
LEGAL REPRESENTATIVE: Fitch, Even, Tabin & Flannery
NUMBER OF CLAIMS: 34
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1347
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 4 OF 21 USPATFULL
ACCESSION NUMBER: 2001:40466 USPATFULL
TITLE: Characterization of granulocytic ehrlichia and methods of use
INVENTOR(S): Murphy, Cheryl, Hopkinton, MA, United States
Storey, James, Linwood, MA, United States
Beltz, Gerald A., Lexington, MA, United States
Coughlin, Richard T., Leicester, MA, United States
PATENT ASSIGNEE(S): Aquila Biopharmaceuticals, Inc., Framingham, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6204252	B1	20010320	
APPLICATION INFO.:	US 1998-66046		19980424	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1997-44933P	19970425	(60)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Swart, Rodney P.
LEGAL REPRESENTATIVE: Hale and Dorr LLP
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 82 Drawing Figure(s); 72 Drawing Page(s)
LINE COUNT: 2806
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 5 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:550009 CAPLUS
DOCUMENT NUMBER: 136:182061
TITLE: Recombinant major antigenic protein 2 of **Ehrlichia canis**: A potential diagnostic tool
AUTHOR(S): Alleman, A. Rick; Mcsherry, Leo J.; Barbet, Anthony F.; Breitschwerdt, Edward B.; Sorenson, Heather L.; Bowie, Michael V.; Belanger, Myriam
CORPORATE SOURCE: Department of Physiological Sciences, University of Florida, Gainesville, FL, 32610, USA
SOURCE: Journal of Clinical Microbiology (2001), 39(7),

2494-2499
CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 6 OF 21 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER: 2001:496748 BIOSIS
DOCUMENT NUMBER: PREV200100496748
TITLE: Serologic and molecular evidence of coinfection with multiple vector-borne pathogens in dogs from Thailand.
AUTHOR(S): Suksawat, Jiraporn; Xuejie, Yu; Hancock, Susan I.; Hegarty, Barbara C.; Nilkumhang, Parnchitt; Breitschwerdt, Edward B. (1)
CORPORATE SOURCE: (1) Department of Clinical Sciences, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough Street, Raleigh, NC, 27606: ed_breitschwerdt@ncsu.edu USA
SOURCE: Journal of Veterinary Internal Medicine, (September October, 2001) Vol. 15, No. 5, pp. 453-462. print. ISSN: 0891-6640.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L22 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:83487 CAPLUS
DOCUMENT NUMBER: 134:350187
TITLE: Immunodiagnosis of **Ehrlichia canis** infection with recombinant proteins
AUTHOR(S): McBride, Jere W.; Corstvet, Richard E.; Breitschwerdt, Edward B.; Walker, David H.
CORPORATE SOURCE: Department of Pathology and WHO Collaborating Center for Tropical Diseases, University of Texas Medical Branch, Galveston, TX, 77555, USA
SOURCE: Journal of Clinical Microbiology (2001), 39(1), 315-322
CODEN: JCMIDW; ISSN: 0095-1137
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 8 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:483461 CAPLUS
DOCUMENT NUMBER: 136:198436
TITLE: Dynamics of IgG1 and IgG2 subclass response in dogs naturally and experimentally infected with **Ehrlichia canis**
AUTHOR(S): Harrus, S.; Waner, T.; Strauss-Ayali, D.; Bark, H.; Jongejan, F.; Hecht, G.; Baneth, G.
CORPORATE SOURCE: School of Veterinary Medicine, Department of Clinical Sciences, Hebrew University of Jerusalem, Rehovot, 76100, Israel
SOURCE: Veterinary Parasitology (2001), 99(1), 63-71
CODEN: VPARDI; ISSN: 0304-4017
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:81421 CAPLUS
DOCUMENT NUMBER: 135:207734
TITLE: Evaluation of a polyvalent enzyme-linked immunosorbent assay incorporating a recombinant p44 antigen for diagnosis of granulocytic ehrlichiosis in dogs and horses
AUTHOR(S): Magnarelli, Louis A.; Ijdo, Jacob W.; Van Andel, Amy E.; Wu, Caiyun; Fikrig, Erol
CORPORATE SOURCE: Department of Entomology, Connecticut Agricultural Experiment Station, New Haven, CT, 06504, USA
SOURCE: American Journal of Veterinary Research (2001), 62(1), 29-32
CODEN: AJVRAH; ISSN: 0002-9645
PUBLISHER: American Veterinary Medical Association
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 10 OF 21 USPATFULL
ACCESSION NUMBER: 2000:7192 USPATFULL
TITLE: Immunodominant 120 kDa surface-exposed adhesion protein genes of Ehrlichia chaffeensis
INVENTOR(S): Walker, David H., Galveston, TX, United States
Yu, Xue-Jie, Galveston, TX, United States
PATENT ASSIGNEE(S): Research Development Foundation, Carson, NV, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6015691		20000118	
APPLICATION INFO.:	US 1996-656034		19960531	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Hutzell, Paula K.
ASSISTANT EXAMINER: Masood, Khalzd
LEGAL REPRESENTATIVE: Arnold White & Durkee
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1890
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:219938 CAPLUS
DOCUMENT NUMBER: 130:249405
TITLE: Outer membrane proteins of **Ehrlichia canis** and Ehrlichia chaffeensis and the genes encoding them and the diagnosis of Ehrlichiosis
INVENTOR(S): Rikihisa, Yasuko; Ohashi, Noris
PATENT ASSIGNEE(S): The Ohio State University, USA
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9913720	A1	19990325	WO 1998-US19600	19980918

W: AU, CA, JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AU 9895719	A1	19990405	AU 1998-95719	19980918
EP 1026949	A1	20000816	EP 1998-949384	19980918

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRIORITY APPLN. INFO.: US 1997-59353P P 19970919
WO 1998-US19600 W 19980918

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 12 OF 21 USPATFULL

ACCESSION NUMBER: 1999:113647 USPATFULL
TITLE: Method of growing granulocytic ehrlichiae of the Ehrlichia phagocytophila genogroup in promyelocytic leukemia cell culture, and preparing antigens and vaccines of said granulocytic ehrlichiae
INVENTOR(S): Dumler, J. Stephen, Ellicott City, MD, United States
Madigan, John, Woodland, CA, United States
Goodman, Jesse, Minneapolis, MN, United States
PATENT ASSIGNEE(S): University of Maryland at Baltimore, Baltimore, MD, United States (U.S. corporation)
The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
Regents of the University of Minnesota, Minneapolis, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5955359		19990921
APPLICATION INFO.:	US 1997-788711		19970123 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-519283, filed on 25 Aug 1995
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Housel, James C.
ASSISTANT EXAMINER: Graser, Jennifer
LEGAL REPRESENTATIVE: Sughrue, Mion, Zinn, Macpeak & Seas, PLLC
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 668
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 13 OF 21 USPATFULL

ACCESSION NUMBER: 1999:85230 USPATFULL
TITLE: Method of diagnosing human granulocytic Ehrlichiosis
INVENTOR(S): Dumler, J. Stephen, Ellicott City, MD, United States
Munderloh, Ulrike G., Falcon Heights, MN, United States
Madigan, John, Woodland, CA, United States
Goodman, Jesse, Minneapolis, MN, United States
Kurtti, Timothy J., Falcon Heights, MN, United States
PATENT ASSIGNEE(S): The Regents of the University of Minnesota, Minneapolis, MN, United States (U.S. corporation)
The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
University of Maryland at Baltimore, Baltimore, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5928879		19990727
APPLICATION INFO.:	US 1995-519283		19950825 (8)

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Housel, James C.
ASSISTANT EXAMINER: Shaver, Jennifer
LEGAL REPRESENTATIVE: Sughrue, Mion, Zinn, Macpeak & Seas, PLLC
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 1453
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:203306 CAPLUS
DOCUMENT NUMBER: 131:43303
TITLE: Potential value of major antigenic protein 2 for serological diagnosis of heartwater and related ehrlichial infections
AUTHOR(S): Bowie, Michael V.; Reddy, G. Roman; Semu, Shalt M.; Mahan, Suman M.; Barbet, Anthony F.
CORPORATE SOURCE: Department of Pathobiology, College of Veterinary Medicine, University of Florida, Gainesville, FL, 32610, USA
SOURCE: Clin. Diagn. Lab. Immunol. (1999), 6(2), 209-215
CODEN: CDIMEN; ISSN: 1071-412X
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 15 OF 21 USPATFULL
ACCESSION NUMBER: 1998:91807 USPATFULL
TITLE: Identification of a new Ehrlichia species from a patient suffering from Ehrlichiosis
INVENTOR(S): Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PATENT ASSIGNEE(S): The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5789176		19980804
APPLICATION INFO.:	US 1997-943464		19971003 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1995-394464, filed on 27 Feb 1995, now abandoned which is a division of Ser. No. US 1993-147891, filed on 5 Nov 1993, now patented, Pat. No. US 5413931 which is a continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Elliott, George C.
ASSISTANT EXAMINER: Schwartzman, Robert A.
LEGAL REPRESENTATIVE: Fitch, Even, Tabin & Flannery
NUMBER OF CLAIMS: 10
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 493

L22 ANSWER 16 OF 21 USPATFULL
ACCESSION NUMBER: 96:77558 USPATFULL
TITLE: Immunogenic anaplasma marginale surface antigens, compositions, and methods of use
INVENTOR(S): McGuire, Travis C., SW. 920 Crestview, Pullman, WA, United States 99163

Palmer, Guy H., NW. 335 Dillon, Pullman, WA, United States 99163
Barbet, Anthony F., 31 SW. 21st Rd., Archer, FL, United States 32618
Davis, William C., NW. 300 Yates, Pullman, WA, United States 99163

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5549898		19960827
APPLICATION INFO.:	US 1994-228180		19940415 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1993-79971, filed on 18 Jun 1993, now abandoned which is a continuation of Ser. No. US 1992-875554, filed on 27 Apr 1992, now abandoned which is a continuation of Ser. No. US 1989-335178, filed on 6 Apr 1989, now abandoned which is a continuation-in-part of Ser. No. US 1988-253143, filed on 4 Oct 1988, now abandoned Ser. No. Ser. No. US 1988-245855, filed on 16 Sep 1988, now abandoned And Ser. No. US 1988-141505, filed on 7 Jan 1988, now abandoned which is a continuation of Ser. No. US 1985-761178, filed on 3 Jul 1985, now abandoned which is a continuation-in-part of Ser. No. US 1985-715528, filed on 25 Mar 1985, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Sidberry, Hazel F.
LEGAL REPRESENTATIVE: Saliwanchik & Saliwanchik
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 40 Drawing Figure(s); 37 Drawing Page(s)
LINE COUNT: 2189
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L22 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:104044 CAPLUS
DOCUMENT NUMBER: 126:184769
TITLE: Recombinant expression and use in serology of a specific fragment from the Cowdria ruminantium MAP1 protein
AUTHOR(S): Van Vliet, Arnoud H. M.; Van Der Zeijst, Bernard A. M.; Camus, Emmanuel; Mahan, Suman M.; Martinez, Dominique; Jongejan, Frans
CORPORATE SOURCE: Institute of Infectious Diseases and Immunology, Department of Bacteriology, Faculty of Veterinary Medicine, Utrecht University, Utrecht, 3508 TD, Neth.
SOURCE: Ann. N. Y. Acad. Sci. (1996), 791(Vector-Borne Pathogens), 35-45
CODEN: ANYAA9; ISSN: 0077-8923
PUBLISHER: New York Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

L22 ANSWER 18 OF 21 USPATFULL
ACCESSION NUMBER: 95:40869 USPATFULL
TITLE: Ehrlichia species from a patient suffering from ehrlichiosis
INVENTOR(S): Dawson, Jacqueline E., Atlanta, GA, United States
Anderson, Burt, Tucker, GA, United States
PATENT ASSIGNEE(S): United States of America, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE

PATENT INFORMATION: US 5413931 19950509
APPLICATION INFO.: US 1993-147891 19931105 (8)
RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-687526, filed on 18 Apr 1991, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: Ware, Deborah K.
LEGAL REPRESENTATIVE: Needle & Rosenberg
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 376

L22 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:31138 CAPLUS
DOCUMENT NUMBER: 122:97739
TITLE: Comparison of PCR with other tests for early diagnosis of canine ehrlichiosis
AUTHOR(S): Iqbal, Zafar; Chaichanasiriwithaya, Wiwat; Rikihisa, Yasuko
CORPORATE SOURCE: College Veterinary Medicine, Ohio State University, Columbus, OH, 43210, USA
SOURCE: J. Clin. Microbiol. (1994), 32(7), 1658-62
CODEN: JCMIDW; ISSN: 0095-1137
DOCUMENT TYPE: Journal
LANGUAGE: English

L22 ANSWER 20 OF 21 CABA COPYRIGHT 2002 CABI DUPLICATE 2
ACCESSION NUMBER: 95:24810 CABA
DOCUMENT NUMBER: 942216772
TITLE: Comparison of the dot-blot enzyme linked **immunoassay** with immunofluorescence for detecting antibodies to **Ehrlichia canis**
AUTHOR: Cadman, H. F.; Kelly, P. J.; Matthewman, L. A.; Zhou, R.; Mason, P. R.
CORPORATE SOURCE: Department of Biochemistry, University of Zimbabwe, Mount Pleasant, Harare, Zimbabwe.
SOURCE: Veterinary Record, (1994) Vol. 135, No. 15, pp. 362. 7 ref.
ISSN: 0042-4900
DOCUMENT TYPE: Journal
LANGUAGE: English

L22 ANSWER 21 OF 21 CABA COPYRIGHT 2002 CABI
ACCESSION NUMBER: 91:20505 CABA
DOCUMENT NUMBER: 912216618
TITLE: Immunohistologic demonstration of **Ehrlichia canis**
AUTHOR: Aronson, J.; Scimeca, J.; Harris, D.; Walker, D. H.
SOURCE: Annals of the New York Academy of Sciences, (1990) Vol. 590, pp. 148-156. 10 ref.
ISSN: 0077-8923
DOCUMENT TYPE: Journal
LANGUAGE: English

24. The device of claim 22, wherein the Ehrlichia infection is caused by *Ehrlichia canis* or *Ehrlichia chaffeensis*.

25. An article of manufacture comprising packaging material and, contained within the packaging material, one or more polypeptides selected from the group consisting of the polypeptides shown in SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and variants thereof.

26. The article of manufacture of claim 25 wherein the packaging material comprises a label that indicates that the one or more polypeptides can be used for the identification of Ehrlichia infection in a mammal.

27. The article of manufacture of claim 26, wherein the identification of an Ehrlichia infection is done using a method of detecting presence of antibodies to Ehrlichia comprising:

(a) contacting one or more polypeptides selected from the group consisting of the polypeptides shown in SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and variants thereof, with a test sample suspected of comprising antibodies to Ehrlichia, under conditions that allow polypeptide/antibody complexes to form;

(b) detecting polypeptide/antibody complexes;

wherein the detection of polypeptide/antibody complexes is an indication that an Ehrlichia infection is present.

28. The article of manufacture of claim 26, wherein the Ehrlichia infection is caused by *Ehrlichia canis* or *Ehrlichia chaffeensis*.

29. A method of diagnosing an Ehrlichia infection in a mammal comprising:

(a) obtaining a biological sample from a mammal suspected of having an Ehrlichia infection;

(b) contacting one or more polypeptides selected from the group consisting of the polypeptides shown in SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, and variants thereof, with the biological sample under conditions that allow polypeptide/antibody complexes to form;

(c) detecting polypeptide/antibody complexes;

wherein the detection of polypeptide/antibody complexes is an indication that the mammal has an Ehrlichia infection.

30. The method of claim 29 further comprising contacting the complexes of step (b) with an indicator reagent comprising a signal generating compound that generates a measurable signal prior to the performance of step (c).

31. The method of claim 29, wherein the Ehrlichia infection is caused *by Ehrlichia canis.*

32. The method of claim 29, wherein the Ehrlichia infection is caused by *Ehrlichia chaffeensis.*

33. The method of claim 29, wherein the mammal is a human or a dog.

34. A monoclonal antibody that specifically binds to at least one epitope of an *Ehrlichia canis* or *Ehrlichia chaffeensis* polypeptide, said polypeptide selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, and SEQ ID NO:7.